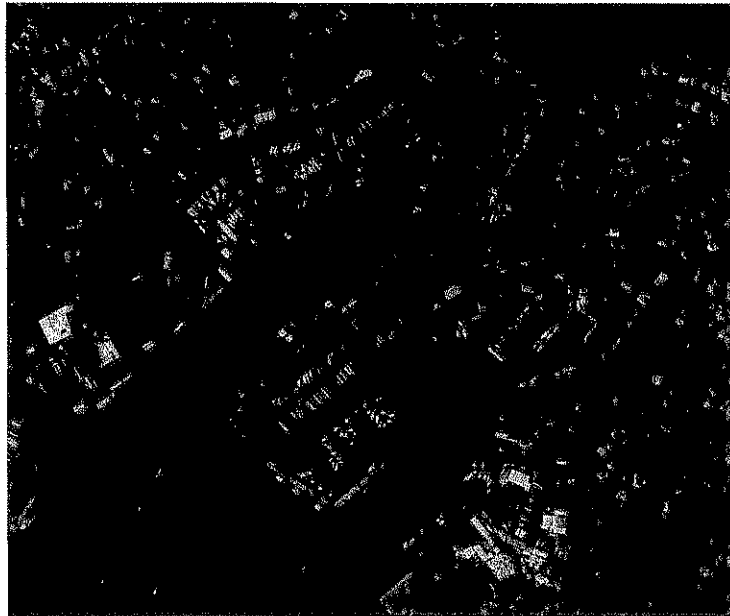


Jodrey State Pier Planning and Feasibility Study

Existing Conditions, Trends and Needs



Prepared for
Massachusetts Development Finance Agency

Prepared by
The Cecil Group, Inc.
with
Fay, Spofford & Thorndike, LLC

June, 2009

TABLE OF CONTENTS

1. Introduction	1
Overview	
Summary of Principle Recommendations	
Findings and Observations	
2. Current Use Profile	6
Ownership and Leasehold	
Major Tenants and Uses	
Pier Layout	
Commercial Fishing Boat Berthing	
3. Regulatory Context	10
Chapter 91	
Federal Regulations and Reviews	
State Wetland Regulations and Review	
State Coastal Zone Management Review	
Massachusetts Environmental Protection Act (MEPA) Reviews	
Massachusetts Department of Environmental Protection (DEP) Wastewater and Sewer Permit	
City of Gloucester Zoning	
4. Existing and Future Berthing Need	15
Summary	
5. Background Interviews	17
List of Contacts	
Summary: Comments by Topic	
6. Industry Data	21
Commercial Fishing Data	
Vessels	
Buying, Processing, and Handling	
7. Context: Other Ports and Similar Facilities	28
New Bedford, Massachusetts	
Portland, Maine	
Newport, Rhode Island	
Point Judith/Galilee Rhode Island	

RECEIVED

JUL 17 2009

**COMMUNITY
DEVELOPMENT**

8. Alternatives Analysis	32
Fish Processing Wastewater Pre-treatment Facility	
Negative Pressure Protein Processing Facility	
Truck Parking and Staging	
Multi-Use Facility	
Expanded Berthing Facilities	
9. Summary of Maintenance and Replacement Costs	37

Appendices

Appendix A

Memorandum: Condition Assessment of Jodrey State Pier Marine Facilities

Appendix B

Memorandum: Alternatives for Waterside Expansion/ Berthing Reorganization Jodrey State Pier

Appendix C

Waiting Lists: Jodrey State Pier and Gloucester City Pier Berthing

Appendix D

Information Sources

List of Figures and Illustrations

<i>Figure</i>	<i>Follows Page Number :</i>
Base Plan	7
Potential Reuse/Redevelopment Areas	8
Truck Clearance Study	9
Jodrey State Pier Berthing Plan	15
Alternatives for Berthing Expansion/Re-Organization	36

1. INTRODUCTION

Overview

This report summarizes studies that have been undertaken of the Jodrey State Pier in Gloucester Harbor, investigating a series of focused topics regarding its current condition and the feasibility of meeting additional needs of the fishing industry. In particular, this study:

- Considers potential commercial fishing industry and directly related uses for an underutilized site that could accommodate a building footprint approximately 20,000 square feet in area at the southwest corner of the piers, in view of the existing tenancies and use patterns.
- Evaluates local industry trends, demand and economic feasibility in regards to potential use of that portion of the pier.
- Summarizes the existing regulatory framework that may apply to significant additions or alterations at the Jodrey State Pier.
- Evaluates the feasibility of expanding berthing in view of the demand for slips, the physical, regulatory conditions at the Pier, and financial feasibility considerations.
- Examines the physical and marine structural condition of the pier and provides recommendations and estimates for future repair and maintenance.

The Commonwealth of Massachusetts owns and provides for the management of the Jodrey State Pier in Gloucester Harbor as a public facility directly supporting the commercial fishing industry. The Pier provides a range of uses and activities today, including docking, loading and unloading, temporary tie-ups for repair and fueling, various fish processing operations and associated shipping activities. The pier also serves several public agencies, including docking for U.S. Coast Guard vessels. Portions of the Pier have never been fully developed, and there are potential locations to re-organize or expand existing facilities as is warranted.

The Pier is owned by the Massachusetts Department of Conservation and Recreation (DCR), which in turn leases the Pier to Massachusetts Development Finance Agency (MassDevelopment). MassDevelopment is responsible for managing the operations and the capital investment in the Jodrey State Pier. MassDevelopment, in turn, subleases portions of the Pier to various commercial fishing companies, boats and operations.

The Jodrey State Pier is managed by the Pier Director specifically appointed for this purpose. The management structure also includes the Pier Advisory Board, a board established in 1981 to provide consultation and assistance to DCR in carrying out the Acts of 1981, Chapter 740 which define public purposes associated with the Pier.

The Cecil Group, Inc. served as the firm responsible for overall planning and design services for this effort. Fay Spofford & Thorndike, LLC (FST) was responsible for marine and site civil engineering research, reviews and recommendations. Separate memoranda have been prepared by FST and are included in the appendices of this report, consisting of an inventory of existing facility and site conditions and studies of potential for commercial fishing boat expansion berthing at the Pier.

Summary of Principal Recommendations

The principal recommendations of this study are as follows:

- Conserve unimproved areas for potential future uses – There are no identifiable, feasible uses for the remaining unimproved areas at the southwest corner of the Pier at this time. MassDevelopment should continue to conserve this area for potential future uses. However, MassDevelopment should entertain proposals that may occur in the future for economically feasible uses that are consistent with the mission of the Jodrey State Pier, in view of the ongoing adaptation of the Gloucester fishing industry to changing conditions.
- Provide 2 additional fishing boat slips – A limited expansion of the existing fishing boat berthing appears to be feasible based on estimated costs and demand. This would add 2 slips for vessels up to 50 feet in length. In view of the active waiting lists for vessels at the pier, demand for this improvement appears justified, and a positive return on the investment is likely to be accomplished.
- Provide ongoing maintenance and repairs – This report includes a list and cost estimates for various maintenance and repairs that will be required to keep the Jodrey State Pier in an appropriate condition.

Findings and Observations

Unimproved Pier Areas

This study finds that there are no current unmet needs for commercial fishing or direct support facilities for the available unimproved area at the southeast corner of the Jodrey State Pier that can be identified, based on a review of current industry economic conditions. The available area should remain undeveloped and provide for interim uses for the convenience of the existing tenants (parking and truck staging) and for temporary layout space for the commercial fishing tenants and others through temporary arrangements.

This conclusion is consistent with the observations that the existing business, facilities and related infrastructure of the commercial fishing industry within Gloucester Harbor were generally created and organized to serve much greater levels of commercial fishing activity than occur today, or that are likely within the near term. The existing commercial fishing industry facilities and businesses within the Harbor continue to adapt to a long-term decline in the groundfish resources and other high-value landings and associated fish processing, including the regulated limits on fishing in place today. “Groundfish” is a

general category of high value that is associated with bottom waters, and include cod, haddock, pollock and other species that once dominated the Gloucester fishing economy.

The existing facilities have adequate capacity both for current levels of activity and to make adjustments if activity levels grow. Among these adjustments has been a focus on the landing and shipping of pelagic fishes. "Pelagic" is a general category that refers to fishes found in mid-water zones and consist of species such as mackerel, herring, and menhaden. Pelagic fishes are used for a variety of purposes, but in general have a much lower market value than groundfish.

Based on the statements of various industry and business representatives reviewed during this study, there is widespread underutilized capacity within existing businesses and facilities that would be adequate to accommodate possible increases in commercial fishing landings on the piers and for shipping, processing and other support businesses located in harborside facilities for any of the current segments of the fishing industry into the foreseeable future.

This study also observes that many fish processing facilities and fishing industry-related activities have been migrating for decades away from pier and harborside locations in Gloucester. Many operations can be more economically located at inshore locations where there are lower land values and lower construction and permitting premiums often associated with waterfront sites. This observation also reflects the altered transportation and transfer process for fish and fish products, which today relies predominately on trucking rather than direct boat offloading to processors, buyers, markets and to other shipment modes.

However, specialized new facility or space needs could occur in the future, reflecting the constant adaptation of the fishing industry to changing resource availability and demand. MassDevelopment should continue to entertain and support any feasible use proposals that may emerge in the future if the prospective use and tenants meet the overall mission of the Jodrey State Pier and the improvements are financially feasible. Such uses could include either new businesses or operations, expansion of existing tenancies, or relocation of existing businesses from other locations within Gloucester Harbor if it would be consistent with both State and City policies and regulations.

Evaluations of Alternatives

Several alternative use scenarios for the available Pier area were specifically investigated in the context of this study. These alternative concepts were assembled from suggestions during interviews and from the *Draft City of Gloucester Harbor Plan and Designated Port Area Master Plan 2006*. The following discussion summarizes the alternatives and findings associated with them.

- Fish Processing Wastewater Pre-treatment Facility – In concept, a central, shared wastewater pre-treatment facility could be provided in Gloucester Harbor to improve the quality of the wastewater stream from fish processing. This could theoretically have the effect of reducing the requirements for wastewater pre-

treatment at individual facilities and reduce the contaminant load on the municipal wastewater infrastructure. This concept was extensively studied over a decade ago in a report that concluded that it was neither necessary nor recommended at that time (*Water and Wastewater Issues in Developing Gloucester's Fish Processing Industry*. Metcalf & Eddy, Inc. and the Center for Applied Regional Studies, July, 1996.) There is no practical need for such a facility at the Jodrey State Pier at this time, due to the inclusion of wastewater processing at existing fish processors, the reduction in fish processing volumes, the wide geographical distribution of fish processing facilities, and the virtual elimination of incidents of inappropriate wastewater discharge into the Gloucester municipal wastewater system.

- Negative Pressure Protein Processing Facility – Waste recovered from the cleaning and processing of fish has become a commercially valuable bi-product. The waste stream (fish gurry) is currently collected, re-processed and sold within Gloucester Harbor by an existing company, Neptune's Harvest. Suggestions have been raised that a plant could be located at the Jodrey State Pier using new technology that effectively eliminates the odors that have been associated with this waste-recovery process. It has also been suggested that demand for such a facility could be associated with the pelagic fishery, if fish cleaning and processing for this category of fish were to be added to the industry within Gloucester. Currently, pelagic fish are frozen and shipped whole. The market viability of pelagic fish processing has yet to be established within the Gloucester fishing industry. In part, the viability of the cleaning/processing is suppressed by the relatively low value of pelagic fish and their end uses, compared to the high value/food product consumption use of groundfish. In addition, Neptune's Harvest has reported that it is experiencing a significant shortage of fish waste supply from existing Gloucester processors relative to both its capacity and the demand for its product. Given these factors, creation of a separate facility at Jodrey State Pier does not appear to be justified.
- Truck Parking and Truck Storage – Gloucester's downtown and waterfront areas often host trucks that are waiting to load or unload at commercial fishing facilities within the Harbor district. The City has sought alternative staging locations that would remove these trucks. Drivers often need to stay at their trucks for security reasons, because they contain foodstuffs. The Jodrey State Pier cannot serve as a viable location for such truck staging, for several reasons. Such a use would require substantial security and operational staffing as well as capital improvements to ensure that the use would not interfere with other existing Pier tenant and use needs, as well as satisfying security requirements and the associated increased liabilities. The cost of such facilities and services could not reasonably be recouped through fees when there are "no-cost" alternatives available which would compete more favorably with a fee-for-service arrangement. Such alternatives could include enhanced scheduling communication and the use of highway truck stops to delay arrivals in Gloucester.

- Multi-use Facility – The study considered potential advantages of a multiple use facility that might be created on the available Pier area, if there was demonstrated demand for a collection of uses that would not otherwise justify construction of a dedicated facility. If such a facility were feasible, then MassDevelopment might reasonably consider relocating the Pier administrative functions to the new building, in view of the poor condition of the existing building and the high cost of renovation and repairs. However, there is no evidence that there is adequate demand to justify the development of a multiple use facility at this time.
- Expanded Berthing Facilities – This study investigated alternative strategies to satisfy the demand for additional commercial fishing boat berthing at the Jodrey State Pier. This study took into account the significant constraints on additional berthing due to various practical constraints on navigation, channel locations, and acceptable berthing conditions. Three possible changes were identified: addition of two berths by extending an existing float, extension of the dinghy float, and re-use of a dock currently used for fueling/servicing and other activities as for fishing boat berthing. The modest expansion of the existing float for two vessels appears to be feasible. The cost of dinghy float expansion eliminates this alternative as not economically justifiable. The re-use of the fueling/servicing dock is not recommended because of the importance of the existing use and the inability to relocate it to another portion of the Pier.

Observations on Existing Pier Layout and Possible Future Uses

The maneuvering area required for the truck service bays on the eastern edge of the Multi-Tenant Building could substantially reduce the area available for adjacent buildings or uses in the future. MassDevelopment may need to require management and operational standards for the use of the truck loading bays along the Multi-Tenant Building to provide adequate space if and when future facilities are proposed for the southeast corner of the Pier.

If adjacent bays at the Multi-Tenant Building are allowed to be used by large trucks (for example, WB-62 units), the turning radius required for a departing truck would intrude substantially into the adjacent deck area beyond the marked access lanes along the Pier. However, requiring staggered and limited truck sizes would preserve the adjacent Pier deck for other uses. An investigation of this constraint is included in *Section 2: Current Use Profile* below.

2. CURRENT USE PROFILE

Ownership and Leasehold

As noted in *Section 1: Introduction*, the Jodrey State Pier is owned by the Commonwealth of Massachusetts through the Department of Conservation and Recreation (DCR). The Pier is leased to the Massachusetts Development Finance Agency (MassDevelopment). This entity then subleases portions of the Pier to private, commercial fishing companies and provides for other use agreements consistent with the mission of the Pier.

During the course of this study, The Cecil Group reviewed a Plan of Lands that appears to delineate the property and leasehold limits, which was provided by MassDevelopment. The Plan of Lands appears to be the same as land that had been acquired by the City of Gloucester by eminent domain for the establishment of a Fish and Commercial Pier in 1937. This plan notes that the property was transferred to the Commonwealth of Massachusetts for the site of the Fish Pier and is recorded in Book 3104 Pages 219-221 inclusive of the Essex Registry of Deeds. Based on dates indicated on the Plan of Lands, the transfer may have occurred in 1960.

The Cecil Group also reviewed the construction layout drawings for the most recent Pier expansion, which consisted of the concrete dogleg pier and associated berthing floats. A comparison of these two plans indicates that a portion of the dogleg Finger Pier and floating berths may extend beyond the limits of the leasehold, but does appear to extend to the limits of the federal channel. For the purposes of this study, it is presumed that the Commonwealth owns all of the land and watersheet occupied by the Pier and its improvements. The limits of ownership and associated leasehold status and responsibilities should be clarified prior to engaging in additional improvements that would modify or extend pier, wharf or floating berths.

Major Tenants and Uses

Cape Seafoods is the largest tenant of the Jodrey State Pier, including the lease for the entirety of the facility originally intended for multi-tenant use along the North Wharf. The southeast side of this building consists of a truck loading area. Cape Seafoods is engaged in a variety of seafood-related operations, including buying and shipping frozen, whole pelagic fish.

MassDevelopment operates the State Pier Management offices out of a two-story, 5,383 square foot building at the base of the Pier. Additionally, Coastal Zone Management, the Environmental Police and Coast Guard offices are located on the Pier.

Juncker Associates operates a seafood processing consultancy, equipment sales, and wholesaling of frozen seafoods from its address at 1 State Pier.

MassDevelopment leases an array of berthing slips to commercial fishing vessels. Information regarding the location and revenues associated with these leases is included in the description of the Commercial Fishing Boat Berthing, below.

Pier Layout

Wharf and Piers

The Jodrey State Pier is located near the northern end of Gloucester Harbor. The Pier extends from its entrance at Parker Street in a southeasterly direction into the Inner Harbor. It comprises various components, including fill retained behind rip-rap and bulkheads, a wharf, and a series of projecting piers. The overall layout is indicated on the following *Base Plan*.

The North Wharf, constructed in part in 1981, and repaired and expanded in 1996, is a 44-foot wide reinforced concrete deck with steel piles as a base. The wharf provides docking for large vessels using the Pier and the adjacent building facilities. Cape Seafoods, tenant at the Pier, has first priority to use the North Wharf adjacent to the building they lease.

An access drive runs near the center of the Pier, and leads to a marked turnaround adequate for large trucks.

A small apron and lift at the southerly end of the Pier is used for a wide variety of temporary activities for layout, gear and boat repair, loading and offloading of parts and equipment that are needed by the Gloucester fishing fleet. This area represents the largest open and easily accessible layout area for the Harbor fleet, and is valued for that purpose.

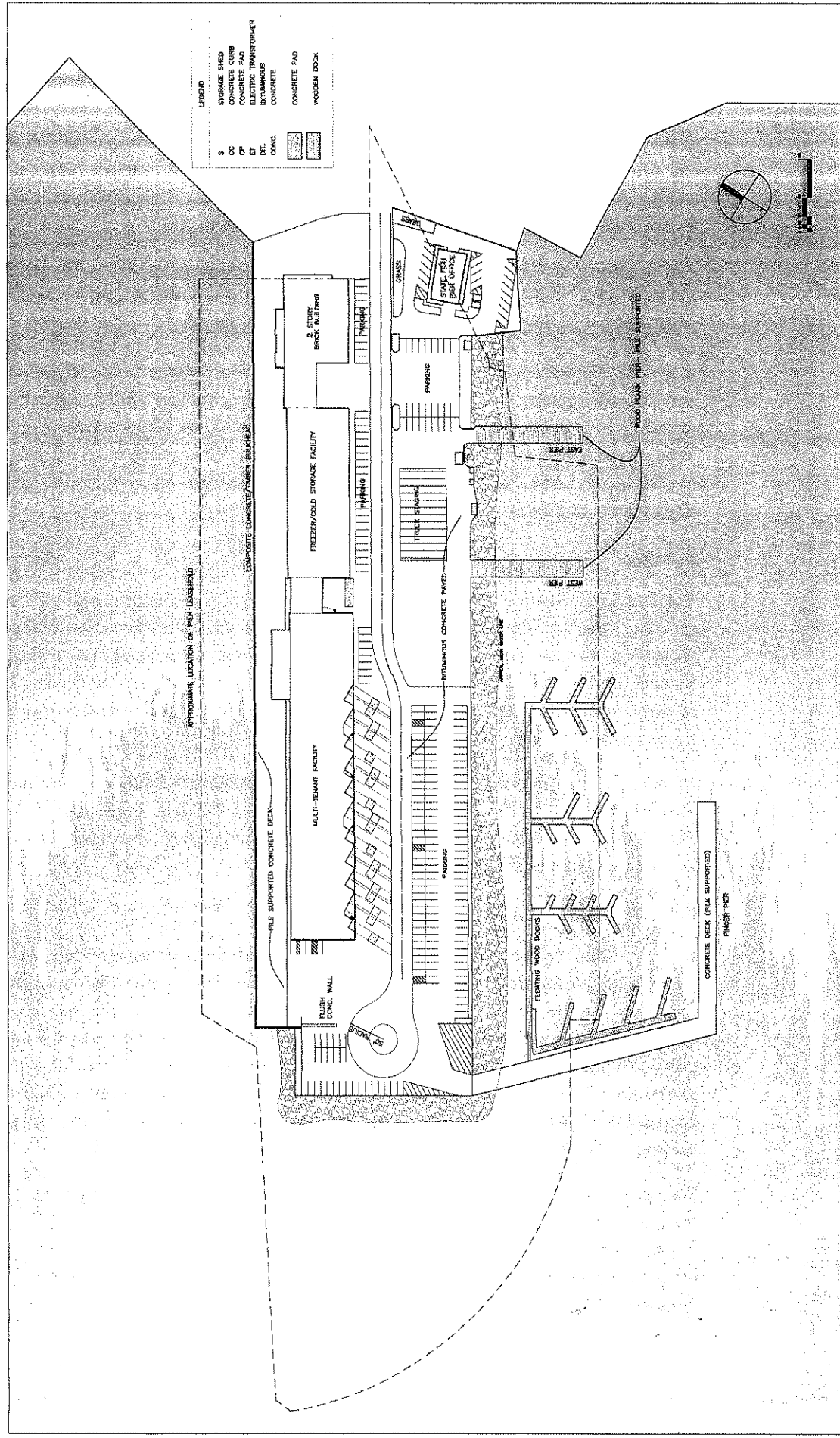
The balance of the open Pier is used for parking and access. These areas are not leased, but a building tenant (Cape Seafoods) is assured of access to both its truck loading docks and an additional 6 truck parking spaces on the Pier at an unspecified location. The open Pier area that occupies the southeasterly corner was originally planned to receive an additional building facility. It is approximately 37,000 square feet in size. The potential for development or use of this area is a specific focus of this study.

The easterly side of the Pier includes two wooden piers (East and West Timber Piers). The East Timber Pier is used for docking by the U.S. Coast Guard and the Commonwealth of Massachusetts Environmental Police. The West Timber Pier is used as an off-loading/loading pier for supplies, for fueling of vessels from fuel trucks, as well as other temporary needs. The West Timber Pier and the adjacent docks provide adequate length and depth to serve large fishing vessels.

A concrete dogleg Finger Pier extends from the end of the Jodrey Pier. The Finger Pier, constructed in 1992, is a 26 foot wide by 643 foot long concrete deck on steel pipes. The southerly and easterly edges of this pier are used for berthing relatively large fishing vessels on a leased basis. Inside of the dogleg configuration are a series of berthing floats that are leased for a variety of smaller fishing vessels. The inside edge of the access float which is parallel to the main Pier is used as a dinghy dock for moored fishing vessels in the Harbor.

Base Plan

Jodrey State Pier



The use and configuration of the Finger Pier was designed to be consistent with the wind and wave conditions within the Harbor. The larger vessels are relatively unaffected by southeasterly winds and waves that move through the Harbor. They also serve to reduce the wind and wave impacts on the interior floats and small vessels.

Fay, Spofford, & Thorndike conducted a condition assessment of the Jodrey State Pier marine facilities in September, 2008. The results are included in this reports as *Appendix A Memorandum: Condition Assessment of Jodrey State Pier Marine Facilities*.

In general, all facilities were found to be in good condition. Specific recommended repairs are relatively minor, including repairing pile jackets, patching spalled concrete, and replacing timber piles and damaged timber curbs on the North Wharf; repairing split pile jackets and the pile coating on the Finger Pier; removing debris and re-attaching spur piles to plumb piles at the Timber Piers; and repairing coating and replacing conical pile caps along the floating docks.

Buildings

The Pier administrative functions occupy the State Pier Office Building near the base of the Pier. MassDevelopment is undertaking a review of the State Pier Office Building (2 State Pier) for possible upgrades. The renovations would target deflection of the floor framing on the second floor, reinforcement of the capacity of the existing building frame to carry snow, wind, and seismic loads to code, and exterior improvements to prevent future water infiltration.

A series of three connected buildings serving the commercial fishing industry line the westerly edge of the Pier. They include a 2-story brick building, a freeze/cold storage facility, and a building originally planned as a multi-tenant building. The easterly side of the Multi-tenant Building is lined with truck loading bays.

Potential Building Sites

As part of this study, sites for the potential new or expanded uses were considered. They are indicated in the following plan, *Potential Reuse/Redevelopment Areas*. The focus site for this study has been the open deck area near the southeast corner of the Pier. This site consists of approximately 37,000 square feet of useable site area. This area was initially planned to be a site for commercial fishing facilities and buildings as part of a phased master plan. This site could reasonable provide space for a building with a footprint of approximately 20,000 square feet; the balance of the area would be required to support parking for nearby slips and to provide access and parking for building uses.

Two other sites are noted. The truck staging area between the two timber piers could be used as a building site, if adequate on-site truck staging were provided for the major tenant in other locations (a total of 6 truck spaces are required). Finally, the site currently occupied by the Pier Office Building could be re-used, if the existing functions were rebuilt or relocated.



During the course of this study, the implications of the truck loading bay layout was investigated relative to the prospect of future building or other site improvements that might be considered for the focus site. Various truck docking configurations were examined and the implications regarding truck maneuvering requirements. The investigations revealed that the docking bays cannot accommodate adjacent large trucks (for example, WB-62 tractor/trailer combinations) without substantially restricting building footprints or other site uses on the adjacent, open site. The results of the analysis are graphically portrayed on the following illustration. A departing truck would intrude approximately 25 feet into the adjacent site, reducing the available site footprint to a width of less than 60 feet. However, if truck loading bay use is restricted so that shorter trucks are staggered with large trucks, then turning radii can be accommodated within the existing Pier access lanes.

This analysis implies that attention must be paid to future use and lease agreements for the Multi-tenant Building if and as future building projects are considered for the adjacent site.

Commercial Fishing Boat Berthing

The commercial fishing boat berthing facility was constructed in 1992 and expanded in 2000 to include that portion of the dock adjacent to the Finger Pier. The location and arrangement of vessels has been established to facilitate secure tie-ups and adequate maneuvering space in the waterways and freeways within the berthing area. The Finger Pier accommodates 8 vessels: 6 berths for vessels up to 100', and 2 berths for vessels up to 75' in length. The dock accommodates 47 floating slips: 8 for vessels up to 30', 13 for vessels up to 35', 12 for vessels up to 45', and 14 for vessels up to 50'. Additionally, the floating dock provides 10 dinghy berths on the side of the dock facing the pier. A copy of the current Docking Plan is included at the end of this section of the memorandum for reference purposes.

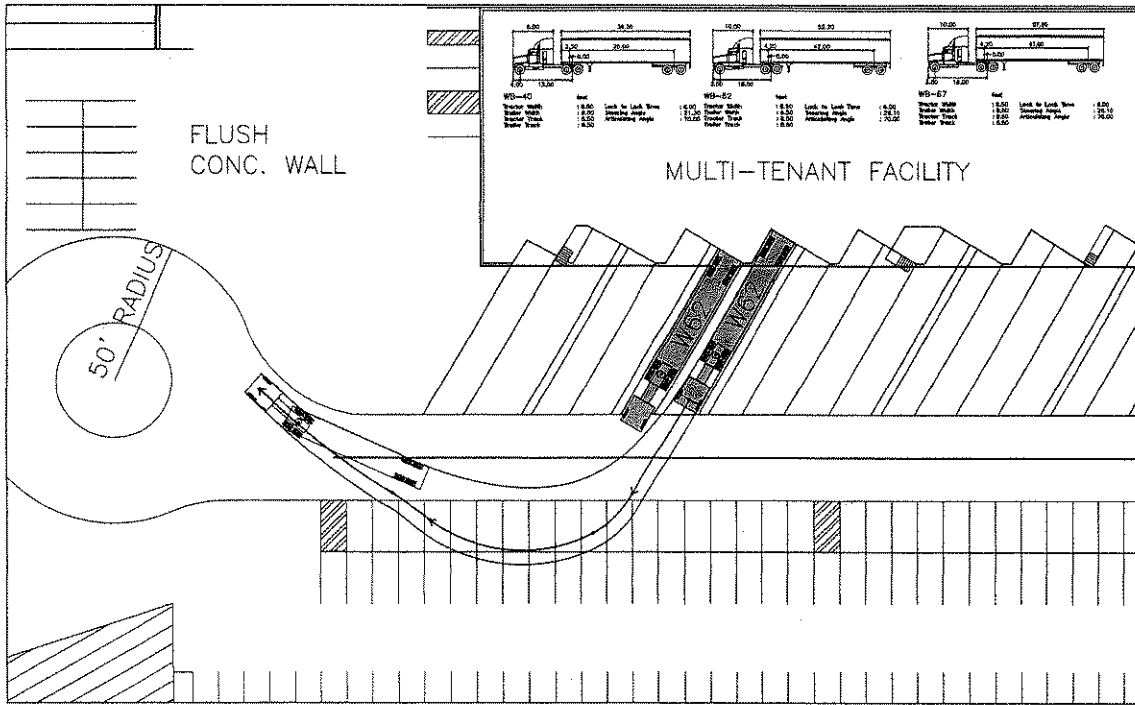
Current slip assignments consist of the following:

Commercial Fishing Vessel Berthing Inventory and Lease Rates, Jodrey State Pier

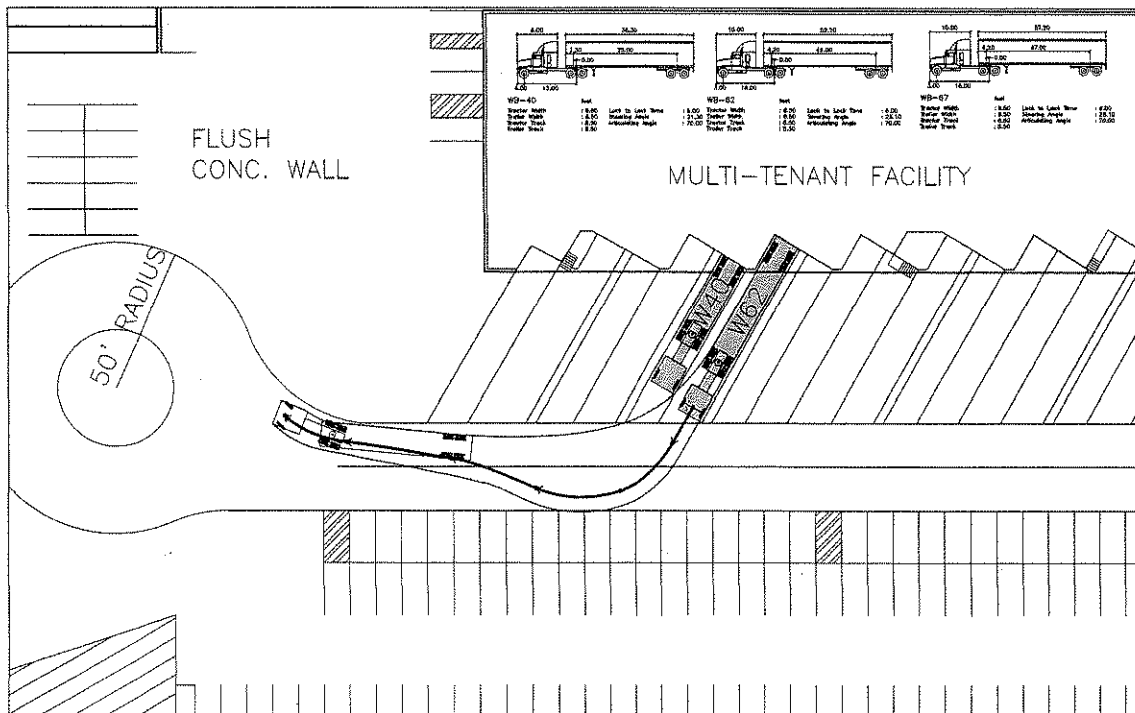
	Berth Size	Number of Vessels	Monthly Rental Cost for Vessel of Berth Size	Monthly Fees Generated for Vessels of each Berth Size
	100'	6	\$683.76	\$4,102.56
	75'	2	\$512.82	\$1,025.64
	50'	14	\$341.88 or \$376.07 (wide beam area)	\$5,025.72 *
	45'	12	\$307.69	\$3,692.28
	35'	13	\$239.32	\$3,111.16
	30'	8	\$205.13	\$1,641.04
Total		55		\$18,598.40

* Average monthly fee of \$358.98 for 50' vessels

Truck Clearance Study



Adjacent Large Truck Clearance Requirements



Staggered Truck Length Clearance Study

3. REGULATORY CONTEXT

Significant improvements or alterations at the Jodrey State Pier are likely to require a number of regulatory approvals. This section of the report provides a general overview of the principal regulatory context for the Pier as a reference. A more detailed investigation would be required prior to planning and implementing improvements or alterations.

Chapter 91

The Commonwealth of Massachusetts administers a set of regulations that implement certain public rights associated with its waterfronts and waterways. This legal framework implements Chapter 91 of the Massachusetts General Laws.

There are three sets of regulations that are relevant to possible improvements or alterations at the Jodrey State Pier. This cluster of regulations is typically referred to as “Chapter 91” regulations. The *Waterways Regulations* (310 CMR 9.00) establish typical standards for licensing of projects that fall within the jurisdiction of Chapter 91.

As part of this study, The Cecil Group assembled Chapter 91 licenses that apply to the Jodrey State Pier and the improvements that compose the facility.

The State has also established a municipal harbor plan (MHP) process that allows local governments to modify portions of the regulations, responding to local circumstances (301 CMR 23.00, *Review and Approval of Municipal Harbor Plans*). Finally, there are special regulations for portions of waterfronts that are Designated Port Areas (DPA's). Because the Jodrey State Pier is within such an area, it is subject to the regulations (301 CMR 25.00 *Designation of Port Areas*).

The State needs to comply with the associated licensing and approval processes - including all associated standards - that are administered by the Massachusetts Department of Environmental Protection (DEP). All of the uses at the Jodrey State Pier and the State's mission for any improvements and operations are consistent with the underlying legal and regulatory framework associated with the applicable Chapter 91 regulations.

The City of Gloucester has prepared and the Secretary of Environmental Affairs has approved an MHP and DPA Master Plan for Gloucester Harbor that is currently in place. The 1999 *City of Gloucester Harbor Plan* provides guidance for a range of improvements and activities within the harbor. It was intended to have a five-year life. The City is currently engaged in a process to update the MHP, and has issued a *Draft City of Gloucester Harbor Plan and Designated Port Area Master Plan 2006* to establish policies and refine the regulatory framework for the future. This *Draft MHP/DPA Plan 2006* has not yet been approved by the Secretary of Environmental Affairs, and as such is not yet binding on either the City or the Commonwealth. However, the City is actively moving forward to complete the planning process, including the completion of local regulations (zoning) and establishing programs and actions consistent with the Draft MHP/DPA Plan 2006.

The *Draft MHP/DPA Plan 2006* focuses on enhancing the Harbor environment, maintaining and strengthening the working port, and developing the historic and cultural

assets of the Harbor. The document recognizes and supports the role of Gloucester as a full-service regional hub fishing port that combines a range of essential services and specialized, essential skills vested in the people who work here. The document calls for maintaining and enhancing the following essential elements and skills (nearly all of which are actively provided at the Jodrey State Pier today):

- Berthing and mooring space for fishing vessels
- Space to maintain and repair vessels
- Space to maintain and store fishing gear
- Gear and supply stores
- Fueling facilities
- Ice plants
- Markets for catch (individual fish buyers and/or seafood auction)
- Fish processors
- Reliable and economical options for transporting fish and fish products
- Port security and emergency response resources
- Experienced fishing crews and captains
- Young fishermen learning the trade
- Lumpers and other dock workers
- Settlement agents and accountants
- Maritime attorneys
- Skilled tradesmen

The *Draft MHP/DPA Plan 2006* also identifies other aspects of the Harbor's economy and infrastructure that need to be strengthened and expanded in a manner that supports and is compatible with the port's primary role as a full-service regional hub fishing port. These include other commercial port uses, port security, the visitor-based economy, and recreational boating.

The *Draft MHP/DPA Plan 2006* includes several recommendations and observations regarding the Jodrey State Pier. The document suggests that the Pier may be an appropriate location for a pre-treatment facility, at least on a demonstration basis. Several studies have focused on this issue, including *Water and Wastewater Issues in Developing Gloucester's Seafood Processing Industry* (Metcalf & Eddy, Inc. and Center for Applied Regional Studies, 1966) and a *Gloucester Harbor Recycling Study* (2003).

Other relevant recommendations of the *Draft MHP/DPA Plan 2006* include the following:

- Priority should be placed on the planned dredging along the north face of the Jodrey State Pier.
- A viewing location should be established along the landside of pier as part of the public access network along the Harbor.
- Provision of secure truck storage for local and off-Pier businesses picking up and making deliveries should be considered for portions of the Pier.

Under the standards established within Chapter 91 and the *1999 City of Gloucester Harbor Plan*, there are significant restrictions on the licensing of new or expanded uses that are non-water dependent or non-industrial. The *Draft MHP/DPA Plan 2006* includes policies that support expanded diversification of waterfront uses. For example, it supports the ability of waterfront property owners to devote up to 65 percent of their property area to create appropriate and non-conflicting commercial uses, as long as they support and do not displace fishing and other marine-dependent industries. This policy would not apply to the Jodrey State Pier, however, as its mission is restricted to businesses and facilities that are directly associated with the commercial fishing industry.

Federal Regulations and Reviews

Construction over the coastal lands and waters involves a series of overlapping federal and state permit reviews. The following are the federal and state regulatory reviews that are expected to be part of the entitlement process for a new facility on the Pier. Upon further clarification of the design for the facility, more specific permit requirements may be identified, as well as additional permits that may apply.

Under agreement with the state, the following federal agencies screen all state permit applications related to the pier construction and grant written authorization to proceed or require a permit review:

- Army Corps of Engineers
- Environmental Protection Agency
- Fish and Wildlife Service
- Marine Fisheries Service

State Wetland Regulations and Review

The project will be reviewed under regulations found in Wetlands Protection Act (MGL Chapter 131, Section 40), implemented by 310 CMR 10.00 regarding construction within the Coastal Resource areas. Under the Wetlands Protection Program, the criteria will include review of impacts to water quality, water circulation, and disruption of habitat.

State Coastal Zone Management Review

Improvement projects that require either state or federal reviews will also be reviewed by the Massachusetts Office of Coastal Zone Management (MCZM) under the MCZM *Program Policies* (adopted March 1997) in order to establish consistency with the policies. Water-dependent, commercial projects must consider all of the policies including supporting policies for construction of these facilities as well as the mitigating policies such as considerations for public access and energy conservation.

Massachusetts Environmental Protection Act (MEPA) Reviews

Under the MEPA regulations implemented by 301 CMR 11.00, there are thresholds for mandatory and discretionary reviews. The requirement for an Environmental Notification Form and a discretionary review are found under the following possibly applicable thresholds:

- A new pile-supported or bottom-anchored structure with a footprint of 2,000 or more square feet
- New discharge or expansion in discharge to a sewer system of 100,000 or more gallons per day of sewage or industrial waste water

Massachusetts Department of Environmental Protection (DEP) Wastewater and Sewer Permit

The Mass DEP controls new and expanded industrial wastewater projects under regulations implemented by 314 CMR 7.00, the Sewer System Extension and Connection Permit Program. The threshold for new state permits is 15,000 gallons per day, with other qualifying conditions. Seafood processing including waste stream recovery and treatment would likely trigger this threshold, and the associated processes and special regulatory requirements.

City of Gloucester Zoning

As a state-owned facility operated for public purposes, the Jodrey State Pier is not subject to municipal zoning. However, private-sector leaseholds may be considered to be subject to municipal zoning under certain circumstances, and the Commonwealth may choose to cooperate with the municipality as a matter of policy and in the interest of shared planning purposes. These may be established, in part, through the mechanism of the Chapter 91 municipal harbor planning and Designated Port Area planning. The Pier is currently zoned Marine Industrial (MI). All of the uses on the Pier are consistent with this zoning designation.

The *Draft MHP/DPA Plan 2006* for Gloucester Harbor anticipates some zoning refinements that the City is seeking to complete in the near future. Specifically, the draft document recommends new and amended zoning provisions to convert the current Marine Industrial (MI) District into three separate zoning districts.

If zoning changes are adopted by the City as described in the MHP, the Jodrey State Pier will be incorporated into a Marine Industrial Zone 2 categorization. All of the uses that exist or are contemplated within the mission of the Pier facility would remain principal permitted uses within this new category.

In general, the refinements in the zoning districts for other harborfront sites would allow the incorporation of DPA-supporting uses at different densities, depending upon the district. Other provisions would refine regulations for facilities of public tenancy, open space requirements and other aspects of land use regulated both by Chapter 91 and City zoning. The *Draft MHP/DPA Plan 2006* also recommends that recreational water-

dependent uses, including boating, be allowed and regulated in a manner that is consistent with marine industrial uses and provides the advantages that could serve to support the DPA as an economically valuable and compatible component. The new zoning should also support expanded, high quality public access as a network that connects the waterfront to nearby areas. Visitor attractions and exhibits should be anticipated and supported through revised regulations, as well.

4. EXISTING AND FUTURE BERTHING NEED

Summary

The existing Jodrey Pier facilities include berthing for a range of vessel sizes and a dinghy dock for nearby moored commercial vessels. The existing inventory of berths is currently fully leased.

A waiting list is maintained by the management of the Pier, and is provided in *Appendix C*. The information on this list is current, and the length of the list would seem to indicate a substantial potential demand that would exceed any practical ability to expand the supply of slips that may be investigated. The berthing waiting list at the Jodrey State Pier lists 24 vessels, with the oldest applications dating to April, 2003. The most sought-after berth size is 45 feet, with eleven applicants on the waiting list. Applications for 45-foot berths date from April, 2003 to September, 2007.

The waiting list for 30' berths currently holds two applicants, with application dates of April, 2007 and March, 2008. There are four applicants on the waitlist for berths of 35', dating from June, 2004 to August, 2007. There are three applications for 50' berths, dating from June, 2005 to January, 2007. Additionally, four dinghies are on the waitlist for slips. Currently there are no applicants for 75' or 100' berths.

The City of Gloucester also maintains a berthing facility for commercial fishing vessels (St. Peter's Square Marina), which provides an additional indicator of the need for berthing facilities. The City's Harbormaster has provided The Cecil Group with its current waiting list of vessels, which indicates 13 vessels are interested in attaining slips. This list is also provided in *Appendix C*. Only one duplicate applicant appears on the waiting list for the Jodrey State Pier.

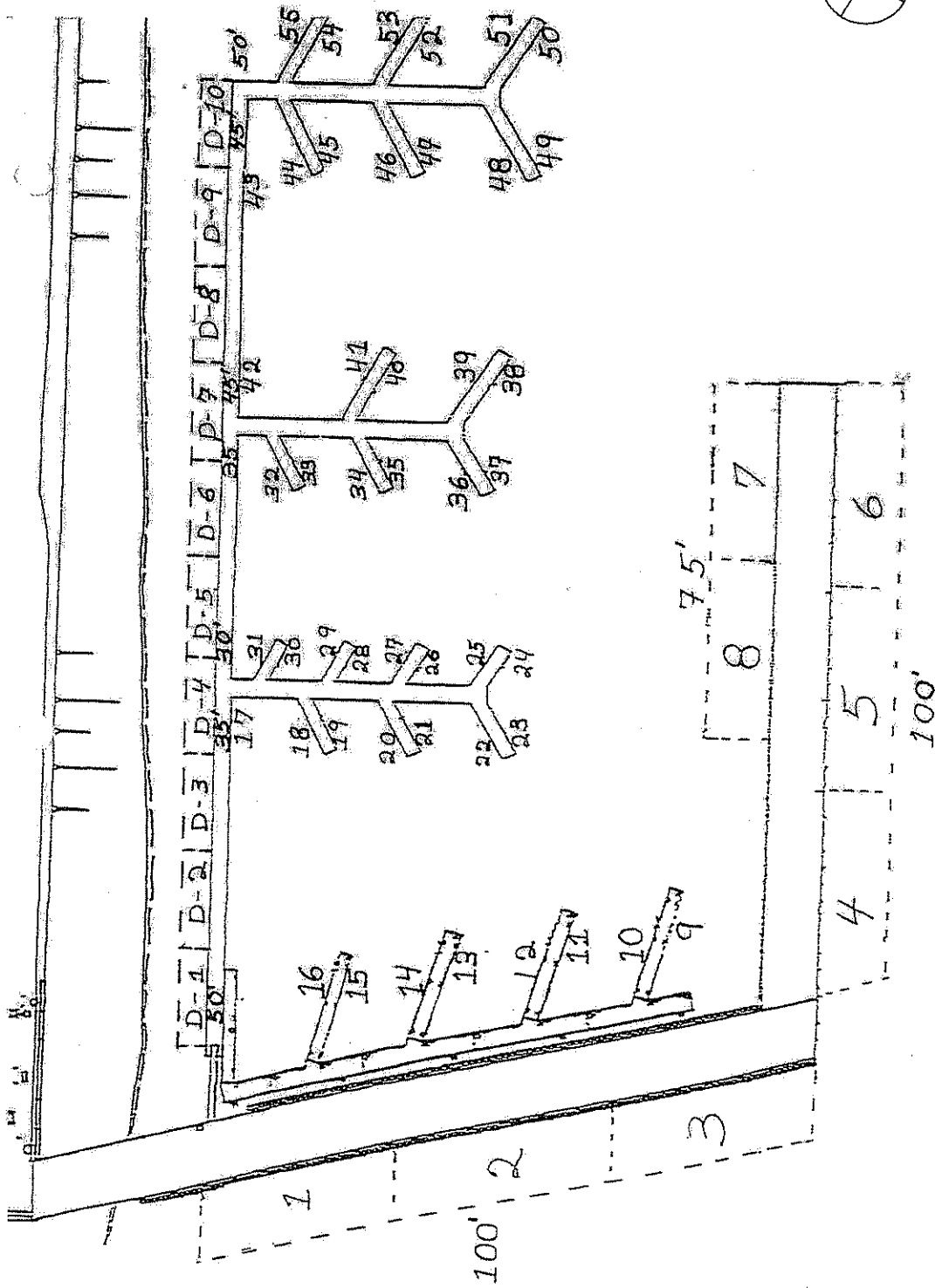
At St. Peter's Square Marina, the waitlist holds six applicants requiring 30' berths, one for 35', one for 40', and 5 for 45' berths. This list echoes the State Pier list in highlighting the additional berthing need in Gloucester for vessels between 30' and 45'.

The lists provide the address of the owner, but not the current location of the vessel. Based on discussions with interviewees, it is likely that the vessels are scattered among numerous locations within the greater Boston Harbor to Gloucester Harbor area. Owners are likely to be seeking more convenient locations relative to the various services and facilities that Gloucester Harbor provides as a regional commercial fishing hub port. In addition, interviewees underlined that the Jodrey State Pier is considered to be a prime berthing location because of the quality of the facilities, its accessibility, and the high quality of the management of the facility.

In sum, there is adequate evidence to suggest that at least a limited number of additional slips would be absorbed in the short term, if made available at current market rates.

Berthing Plan

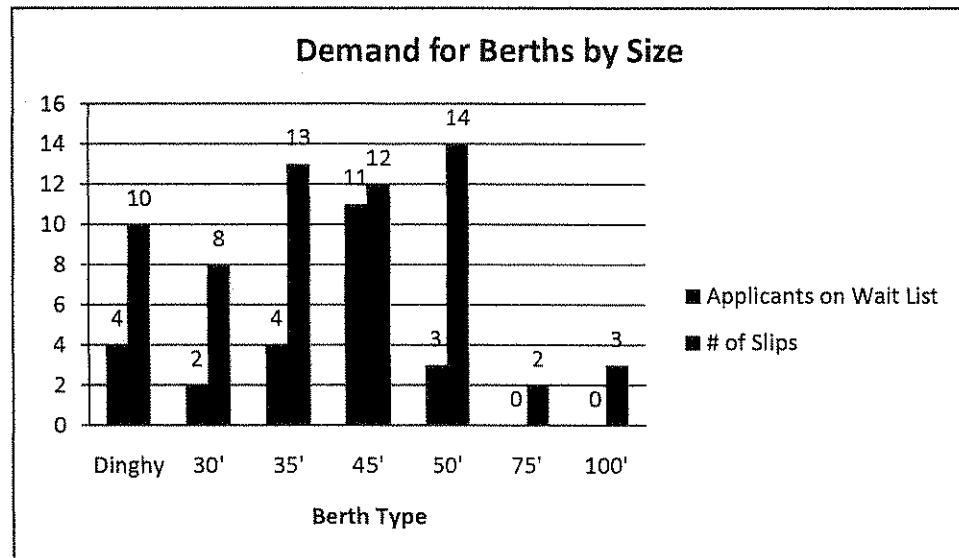
Jodrey State Pier



Prepared by The Cecil Group

Jodrey State Pier Planning and Feasibility Study ■ Massachusetts Development Finance Agency

Jodrey State Pier: Waiting List Analysis



5. BACKGROUND INTERVIEWS

List of Contacts

As part of the review of existing conditions, The Cecil Group undertook discussions and interviews, and reviewed presentations on relevant topics by various individuals familiar with the State Pier, Gloucester Harbor and the status of the fishing industry. These included:

- Peter Bent, Chair, Gloucester Waterways Board
- Sarah Buck, Director of Community Development, City of Gloucester
- Gregg Cademartori, Planning Director, City of Gloucester
- Vito Calomo, Executive Director, Massachusetts Fisheries Recovery Commission
- Larry Ciulla, Gloucester Display Auction
- George Darcey, Assistant Regional Administrator, NOAA NMFS
- Frank Elliott, Gloucester Marine Terminals (Cruiseport Gloucester)
- Sandy Parco, Vice President, Neptune's Harvest
- Greg Power, NMFS Fishery Statistics Office
- Anthony J. Verga, State Representative (formerly Gloucester Fisheries Commissioner)
- Jerry O'Neill, Sr., Cape Seafoods Inc.
- Ramon (Ray) Pena, Senior Planner, RIDEM Coastal Resources
- Angela Sanfilippo, President, Gloucester Fisherman's Wives Association
- Jack Wiggin, Director, Urban Harbors Institute
- Roy Zaffiro, Channel Fish Processing Co., Boston

Summary: Comments by Topic

The discussions often covered similar topics, and generally provided convergent and consistent vantage points relative to the topics that are the subject of this study. Relevant comments are summarized according to topics, to facilitate review. They represent the viewpoints of the interviewees, and do not necessarily reflect the findings or opinions of the consultant team.

Status and Trends in the Gloucester Fishing Industry

- Gloucester is an opportunistic fishing port, supporting a wide range of entrepreneurial fisherman that have allowed it to remain viable over time.
- Retaining flexibility to adjust to changing needs is important.
- The lack of resource and the fishing restrictions has resulted in a substantial reduction in both the number of vessels and vessel sizes that most individuals do not believe will significantly reverse within any short-term or mid-term time frame.

- Most of the fishing industry operations and facilities are operating at well under their maximum capacity, and are not using their capital facilities to full benefit. This includes freezing and processing capacity.
- The groundfishing industry is – at best – stabilizing at a substantially lower level than existed in the past.
- The volume and range of groundfishing stocks are not likely to return to substantial levels that would replenish the range and type of commercial fishing activity in Gloucester within the foreseeable future.
- The relative health of certain stocks (haddock) is not nearly enough to indicate substantial changes in the trends.
- The pelagic fishery has been strong and has dramatically increased as a percentage of the port's fishing activity. It is not regulated and could be the basis for expanded activities. Pelagic fish include herring and mackerel and are an oil rich species.
- The pelagic fishery exhibits unpredictable and significant fluctuations in catches that appear to reflect natural conditions.
- Production of ice is a critical component of the Port as a hub. The only dedicated ice plant remaining is operating at a fraction of its capacity, and has had to augment its business with non-fishing industry product lines and customers to survive.
- About 50% of the ice being produced for the fishing industry is used by the Gloucester operations; the remaining supply is being sent to Portland and Boston.
- Americold had developed freezer plants (3 large facilities) capable of handling millions of pounds of "blocks", but have substantial underutilization of facilities under current conditions.
- Any investment or improvement that adds to the overall diversity and flexibility of this opportunistic port will be welcome.

Fish Processing

- Much of the fish processing no longer needs to be located directly on the harbor, for the most part. Significant operations have located inland in other industrial parks and industrial locations that have better access to trucking, the highway system, and can support lower land and facility costs relative to the high cost and high value of waterfront property.
- The relocation of Good Harbor Filet to Gloucester's Industrial Park is a good example of a facility that would traditionally have sought waterfront space.
- Additional refrigeration/freezer capacity on the Pier would be advantageous to Cape Seafoods relative to their current and projected needs.
- Fish processing on the Pier has advantages relative to off-loading vessels, trucking, and general accessibility.

- Neptune's Harvest provides the gurry processing functions within the Harbor as a profit-making business which has been successful in creating fertilizer as a product. In this process, the waste parts left over after cleaning fish are converted into a valuable product. However, this business is suffering from a lack of source material because of the relatively low catches. Last year, there was a shortage of 90,000 tons relative to the orders that could have been filled (2007).
- The pelagic catch is not being processed in the Port, but is being shipped whole.
- There may be an international market for processed pelagic fishes, and the prospect for such product lines is being pioneered in some ports. In particular, there may be a substantial market opportunity in China.
- Gloucester could benefit by introducing modern pre-treatment/gurry protein processing linked to the pelagic fishery, and create opportunities for processing that is not occurring in the Harbor today.
- Given the plentiful resource and the lack of fishing restrictions, pelagic fisheries and pelagic processing could represent significant growth opportunities.
- The pelagic resource is being sought for certain food qualities and opening of new markets, including the omega 3 oil content, and the value of fertilizer and fish farming pellets in Africa and Asia.
- The lobster fishing industry appears to be relatively stable and well served. Industry and port circumstances in Portland and the Maine coast will tend to determine the pattern of port facilities and lobster trade in Gloucester.

Wastewater Pre-Treatment and Waste Stream Processing

- New technologies (negative pressure plants) allow for efficient waste-stream processing into valuable products. Such facilities are relatively small.
- The ability to provide for additional and adequate fish processing capacity in the Harbor and Gloucester may be linked to the ability to provide for a pre-treated wastewater system.
- As a community, Gloucester has significant restrictions and relatively high costs associated both with clean water supply and the capacity to accommodate waste water streams.
- The memory of the odors associated with a previous gurry plant at the State Pier will make community acceptance of a new facility – even if the technology is improved – a major problem.

Fishing Vessel Berthing and the Jodrey State Pier

- The average size of vessels has substantially declined, and the need for large vessel berthing is not likely to return.
- The predominance of smaller vessels matches the needs and fishing patterns associated with the location, type of fishing resource available, and the regulated fishing patterns that characterize the fishery today.

- It is most likely that additional berthing would be absorbed by boats currently docked outside of Gloucester Harbor, and are located in small ports and berth in the overall Boston/north area.
- Demand is generally for berthing in the small boat (30 feet to 50 feet) range.

Relationship to Other Harbor Needs and Facilities

- There are suggestions from several perspectives that the Pier could serve uses that are outside of its commercial fishing mission, but which would benefit the overall harbor such as temporary mooring of tourism-related vessels, if there were available space.
- There are persistent concerns that the DPA status of waterfront landings is blocking the ability of property owners and the City to realize redevelopment of compatible uses that would benefit and support the remaining fishing and maritime commercial business and landowners.
- The Pier is an unwelcome competitor for berthing in the view of some property owners along the harbor.
- The Pier is highly desirable as a location and considered a “good value” that is superior to other locations as a well-run, well-designed facility.

6. INDUSTRY DATA

A general review of commercial fishing data was undertaken to provide a background for the focused purposes of this study. The review is intended to provide the context for consideration of possible uses for the available site at the southeast corner of the Jodrey State Pier, in view of the overall trends in the commercial fishing industry as it relates to Gloucester Harbor. Information regarding other, similar ports in New England was also consulted in order to provide a perspective regarding possible needs for facilities or infrastructure.

The review indicates that Gloucester continues to adapt to long-term declines in the volume and value of the fishing supply. Other ports are similarly adapting to changing resource and regulatory patterns. In general, there does not appear to be any significant unmet demand for buildings, uses or facilities at the Jodrey State Pier for which capacity already exists within Gloucester Harbor or the local supporting companies and infrastructure. Other similar ports appear to be occupied with maintaining, repairing or consolidating the facilities associated with the commercial fishing industry, rather than undertaking investments in new facilities.

Commercial Fishing

Gloucester's economy has been historically linked with groundfishing – the landing, processing, and shipping of cod and related species. The high value of this resource for food was linked to substantial investments in every aspect of the fishery. The groundfishing industry experienced several peak periods which required specialized and extensive waterside and landside facilities within Gloucester Harbor. Most of the existing infrastructure of facilities and businesses within the Harbor date from earlier stages in the evolution of the groundfishing economy, when high volume catches were being landed, shipped, cleaned or processed.

However, the dominance of groundfish has in recent decades decreased considerably. Groundfish landings were highest in Gloucester in the late 1970's - early 1980's, and since then have suffered a long-term decline through a series of fluctuating landings. In 2001, groundfish counted for just over 40% of total revenues in the harbor, down from a high of nearly 80% in 1984. In terms of landings, Gloucester Harbor recorded a high of 81 million pounds of groundfish landed in 1981. In 2003, that figure hovered at around 14 million pounds.

This fishery has been subject to long-term declines in both volume and gross values due to an array of factors. Under current conditions, groundfishing is subject to substantial regulatory restrictions and a persistent decline in the fish populations. While there are a number of studies and numerous opinions regarding the long-term potential to revive groundfishing in the North Atlantic off of the New England coast, there are no immediate or predictable prospects that it will be restored to a level that would revitalize and refill the capacity that once existed in Gloucester Harbor. Current trends have led to a

groundfishing fleet with fewer, smaller vessels that can more efficiently operate with less fuel and smaller crews within the shortened available fishing periods.

The Gloucester commercial fishing industry has adapted to alternative fisheries which have become proportionately more important in terms of the operations, and waterside and landside requirements. Lobstering remains an important part of the Gloucester economy. Mid-ocean species including tuna and swordfish have been an active fishery in Gloucester. There is also an active pelagic fishery, which is focused on mid-water species such as mackerel, herring and menhaden. The value/pound of the pelagic fishery is significantly lower than groundfish, and it is used for a variety of end products, with a relatively small proportion destined for human consumption.

The decline in groundfishing has led to a corresponding decline in services, supplies and infrastructure associated with the vessels and that fishery. While there has been extensive adaptation in order to respond to alternative fisheries, a general observation can be made that the overall scale of the fishing industry remains smaller and generally requires fewer businesses, facilities and infrastructure investments than were previously necessary.

The data reviewed during the course of this study included the following:

- *Assessment of 19 Northeast Groundfish Stocks through 2007, Report of the 3rd Groundfish Assessment Review Meeting (GARM III)*. The Northeast Fisheries Science Center, Reference Document 08-15, August 2008.
- *Northeast Preliminary Fisheries Statistics, Multispecies (May-June 2008) and Scallop (March-June 2008)*. The Fishery Statistics Office, Northeast Regional Office, National Marine Fisheries Service, Gloucester, MA, September 2008 [One in a series of reports.]
- National Marine Fisheries Services, on-line statistical reports

Groundfish: Illustrative Data

Statistics on landings from the NMFS Northeast Regional Fisheries Statistics Office, provides selected multispecies data regarding the landings, location of the catch, and gear by major port and state. The latest data is from May-June 2008 (which was issued September 2008 as preliminary data and subject to change). This information was used to create the charts included here, which show tonnage landed and ranking compared to several other New England ports. The other ports in the comparison are Portland, Point Judith, and New Bedford. While Boston also has reported landings in the data, the landings are not always as consistently strong as at the other listed ports.

By tonnage, Gloucester ranks first among these ports in cod and pollock landings (see chart below). However, these are species placed by the Groundfish Assessment (GARM III) in categories that suggest conditions of the stocks may not be strong enough to maintain these reported landings.

The following table describes the current status of the major stocks landed at Gloucester:

*Groundfish Landings at Gloucester and Status of Major Stocks
May-June 2008*

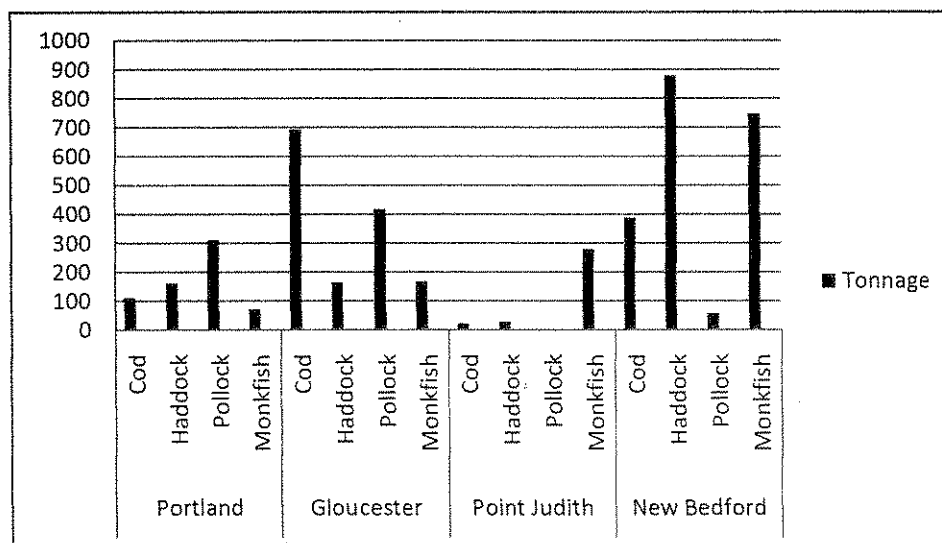
Rank	Tonnage (MT)	Species	GARM III Category
#1	694	Cod	Not overfished but overfishing in Gulf of Maine (where 91% of landings were from)
#1	419	Pollock	Overfished and overfishing
#1	86	Redfish	Not overfished and not overfishing
#1	70	White Hake	Overfished and overfishing
#1	44	Witch Flounder	Overfished and overfishing
#2	163	Haddock	Not overfished and not overfishing
#2	36	Plaice	Not overfished and not overfishing

Source: Northeast Fisheries Science Center

The GARM III information suggests that the groundfish stocks, which are the majority of current landings in Gloucester, are generally getting weaker (comparison between 2004 and 2007). However, according to the Fisheries Statistics, Gloucester appears to successfully harvest a higher diversity of fisheries than the other ports, outside of New Bedford.

The assessments provide estimates of the sustainability of particular commercial species relative to the rate of harvesting. Of the 19 groundfish species, 11 species were classified as overfished in the Northeast as of 2007, an increase from 7 overfished stocks in 2004. The assessment registers fluctuations in both fishing mortality and biomass levels for groundfish species in the Northeast. Eight groundfish species showed decreases in fishing mortality, whereas 9 species showed moderate to large increases in fishing mortality.

Landings of Commercial Species: Gloucester and Other New England Ports



Source: NMFS Northeast Regional Fisheries Statistics Office

All Commercial Species: Illustrative Data

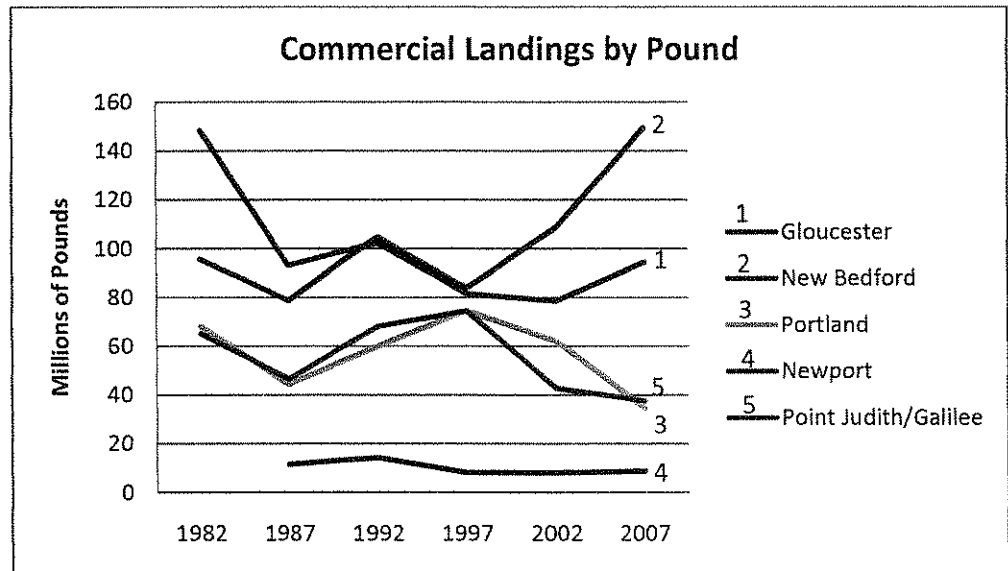
Commercial species other than groundfish have become relatively more important as a proportion of the Gloucester and New England fishing economy. Hagfish, monkfish, lobster and mackerel are being landed in increasing quantities. Other important species include herring, tuna, whiting, and scallops. Lobster fishing represents an increasingly important component of Gloucester's fishery. It has become the state's leading port for both lobster landings and lobster licenses.

The pelagic fishery, including herring and mackerel, has filled in some of the capacity of the fishing fleet and harbor facilities, and is an increasingly important part of the catch. Landings by species and trends are not readily assessable, unlike the well-documented groundfishery. While it has become a more important proportion of the fish landings, the value of the pelagic resource is considerably lower than the groundfish species, representing approximately 5 to 10 percent of groundfish market values. In 2006, pelagic landings totaled 126.9 million pounds, considerably greater than the 2001 total of 46.8 million pounds. The value of these landings was \$9.1 million in 2006, nearly quadruple the 2001 value of \$2.5 million. It should be noted that this fishery has become a substantial component of Cape Seafoods' business.

These trends are regional in scope. For instance, 90 metric tons of atlantic halibut, a common groundfish species, were landed in the New England region in 1985. By 2007 that number was just 23 metric tons, following a 2002 low of 10 metric tons. Conversely, atlantic mackerel landings in 1975 were at 677 metric tons in the New England region, and by 2007 stood at over 23,000 metric tons landed. Similarly, lobster landings in the New England region have risen steadily since 1975 when they stood at approximately 13,000 metric tons landed, whereas in 2007 nearly 35,000 metric tons of lobster were landed.

The following table indicates the long-term trends in the volume (as measured in pounds) of the commercial landings in Gloucester and for several other New England ports. This chart indicates that Gloucester's volume has decreased from nearly 150 million pounds in 1982 to less than 100 million pounds in 2007.

25-Year Trends in Comparative Landings: Gloucester and Other New England Ports

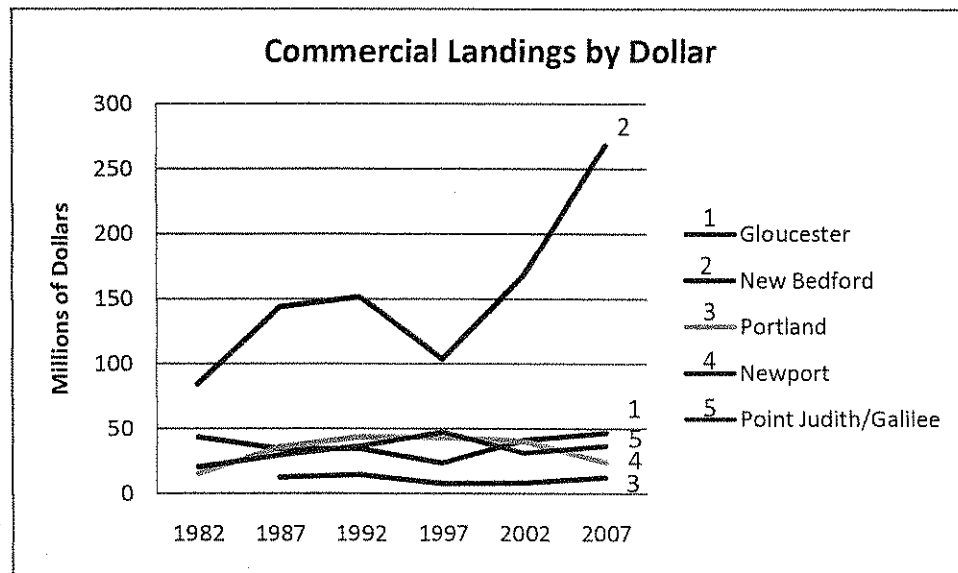


Source: NMFS Northeast Regional Fisheries Statistics Office

The following chart illustrates the long term trends in the value of commercial landings. It would appear that the value of the Gloucester landings has stayed relatively constant over a 25-year period. However, the data tracks the value of landings in current dollars, but does not account for inflation. Using Federal Reserve inflation rate statistics, the adjusted real value of the 2007 Gloucester catch had declined to approximately 47% of the value of the landings in 1982.

25-Year Trends in Comparative Values: Gloucester and Other New England Ports

Note: These figures as reported by NMFS are in current dollars, and so do not account for inflation. The cumulative inflation rate from 1982 to 2007 was 114.9% (*U.S. Federal Reserve Inflation Calculator*). As a result, this chart should be interpreted accordingly. For example, unadjusted value of landings in Gloucester appear to be fairly consistent over the past 25 years. However, adjusted for inflation and using constant dollars, the value of landings in 2007 is less than half of the value in 1982.



Source: NMFS Northeast Regional Fisheries Statistics Office

Vessels

The trends in vessel size and number parallel the groundfishing trends. Over time, the fleet has become smaller in number and shorter in length.

Statistics reviewed for this report indicate that Gloucester was the home port for approximately 138 vessels of over 60 feet in length in 1983. Subsequent reports indicated a fleet with 40-50 groundfish trawlers of 70-100 feet and 70 vessels of 50-70 feet in length in 1994. However, by 1999, there were only 9 large groundfishing vessels reported operating out of Gloucester, out of a total of approximately 100 vessels.

In 1997, a federal buyback program was instituted in the New England groundfish fisheries to reduce fishing capacity, part of an initiative to preserve groundfish supply in the region. Thirteen Gloucester vessels, 12 of which were over 60 feet in length, were purchased through this program.

Buying, Processing, and Handling

There has been a general decrease in the activities associated with buying, processing and handling fish within Gloucester Harbor in view of the long term trends discussed above. Several observations may be pertinent to the structure and character of the current local economy.

A primary focal point for the buying of groundfish landed in Gloucester is the Gloucester Seafood Display Auction, a 40,000 square foot facility servicing over 100 vessels which opened in late 1997. The Auction sells to regular buyers and processors both within and outside of Gloucester. The display auction is credited with both boosting groundfish prices and bringing a significant number of boats outside of Gloucester to land fish in the port. By 2003, the auction had become primarily a groundfish auction, by which time there were only three groundfish processors on the Gloucester waterfront: Ocean Crest, Pigeon Cove/Whole Foods, and Steve Connolly Seafood Co.

The processing of fish waste as a by-product has become an important component of the commercial fishing industry. This aspect of the industry is represented in Gloucester by a specialized company, Neptune's Harvest. The fish waste or "gurry" is shipped to the plant by truck, where it is processed, packaged and shipped to market.

One of the fish processing and handling operations in the Gloucester Harbor is situated on the Jodrey State Pier.

- Cape Seafoods, Inc. specializes in the grading and freezing of whole round food grade herring and mackerel. Cape Seafoods currently rents the entire multi-tenant facility fronting the North Wharf of the Jodrey State Pier, which houses the herring plant and freezers for the company. While the facility was initially intended to house existing fish processing enterprises around the harbor, business owners could not be properly incentivized to relocate, due in part to restrictive marine industrial zoning which limits property values around the Gloucester Inner Harbor.
- Juncker Associates & Company, Inc. are seafood processing consultants, brokers and traders of frozen seafoods and by-products, and sellers of food industry equipment.

7. CONTEXT: OTHER PORTS AND SIMILAR FACILITIES

As part of the overall research effort, a review was conducted of relevant conditions within other ports that have state-owned piers and important fishing industry components. This review was undertaken to understand how trends in resources, regulations, technology and trade may be influencing capital improvements at public-sector piers and facilities in other fishing ports. This review did not consist of a more general evaluation of the fishing industry as it relates the port or harbor in question.

This research indicated that the evolving fishing industry is responding to new market and resources challenges through strategies that involve either very limited or no new capital improvements. The Cecil Group undertook interviews, literature reviews and reviews of available statistical information of ports that included New Bedford; Portland, Maine; Newport, Rhode Island; Point Judith/Galilee, Rhode Island; Rockland, Maine and others.

In general, the emphasis of the capital improvements has been on repair and maintenance of current facilities. As in Gloucester, new fish processing and storage facilities are limited and tend to occupy sites that are no longer along bulkheads and piers, but are being located inland to take advantage of trucking access.

The following notes provide observations regarding some of the public commercial fishing facilities and related port conditions.

New Bedford, Massachusetts

The New Bedford State Pier is a bulkheaded wharf consisting of eight acres with 1,800 feet of berthing space divided amongst 68 available berths. The Pier has a 25-30 foot draft, and provides approximately 97,000 square feet of dry storage and 130,000 square feet of open storage. The Pier is owned by the Commonwealth of Massachusetts, and managed by the Department of Conservation and Recreation.

In addition to its limited commercial fishing operations, the New Bedford State Pier also supports two carriers for international freight shipping, a trucking operation, a ship supply work site, and the New Bedford Ferry Terminal located on the Pier's north side. Additionally, the Massachusetts Environmental Police and Massachusetts State Police Marine Unit both maintain office space on the Pier.

New Bedford Harbor serves as the homeport for more than 300 commercial fishing vessels and services over 100 transitory vessels. As such, demand for berthing space is high, and the waters around the State Pier experience congestion. The Port of New Bedford is currently under examination for options to relieve congestion at the docks and to recommend a berthing strategy.

Current infrastructure repairs and improvements are part of a plan to introduce additional maritime trade to the State Pier site, including the expansion of freight shipping and passenger services such as ferries and cruise ships. Recent improvements have included

piling repairs, the installation of a floating dock system, and preliminary engineering work to rebuild the bulkhead at the perimeter of the pier.

Other public facilities in New Bedford Harbor are administered through the New Bedford Harbor Development Commission (HDC). A state-chartered authority, this entity is responsible for planning, developing, financing and administration of a variety of city properties and maritime development initiatives within the Port.

The City-owned Fisherman's Wharf provides berthing and vehicle access for the commercial fishing fleet, and is composed of two facilities (City Pier #3 and #4). It is part of a cluster of commercial fishing and other marine-industrial facilities that compose New Bedford's central waterfront. Public improvements slated for this area of the waterfront are focused on includes bulkhead and fender repairs, drainage improvements and surface parking improvements.

The South Terminal is a major, multiple user facility focused on commercial fishing and fish processing. The facility is composed of about 25 acres of land and includes a 1,200-foot bulkhead for off-loading to shoreside shipping and processing. The South Terminal is the site of the Whaling City Seafood Display Auction, which handles transactions for approximately 300 vessels with contemporary technologies linked to international markets.

Portland, Maine

The Portland Fish Pier is a City-owned facility that serves as a hub for the commercial fishing industry, and is the most comparable facility to the Jodrey State Pier. The Portland Fish Pier is used for the great majority of groundfish landed in Maine. Approximately 240 vessels use the Pier's facility, including 180 vessels home-berthed in the area. The level of activity is highly ranked in New England and in the U.S.

The Pier is administered by The Portland Fish Pier Authority which is organized as a local development corporation with the focused mission of managing this facility. In addition to the Portland Fish Exchange, the Pier serves the fishing industry with a variety of tenants and provides services and facilities for fuel, net repair, ship repair, electronics and commercial gear.

The Portland Fish Exchange is a regional hub center for the commercial fishing industry. It serves both the offloading and auctioning of seafood. The landings are handled in a 22,000-square foot refrigerated inspection warehouse adjacent to the auction, and then are shipped to other destinations and processors.

Reports reviewed for this study indicate that the general decline in the groundfishing industry has affected the Pier. Reports indicate negative trends in groundfish landings coming year and continued expected reductions. The income for the Portland Fish Exchange is directly related to groundfish landings rather than other species. Recent improvements have included a 2007 Federal grant for \$500,000 to accommodate an additional tenant within the Portland Fish Exchange. In view of the declines in activity, the City's policies continue to support the dedicated use of the Pier for the fishing industry,

rather than adding other uses to generate income. This policy is being maintained with the long-term view that the groundfishing industry may rebound.

The Maine State Pier (MSP) is a City-owned, deep-water marine facility on the Portland waterfront. The Pier contains a 100,000 square foot cargo shed along its easterly perimeter adjacent to a 1,000-foot deepwater berth, and a Ferry Terminal located on its westerly side. The MSP operates in conjunction with the proximal Atlantic Pier, a 600-foot finger pier developed to serve a dry dock.

The City of Portland recently issued a request for proposals for the lease and redevelopment of the Maine State Pier. Functional improvements are to include the preservation of berthing for vessels up to 80,000 GWT, the repair of deteriorated piles and foundation supports, the stabilization of fill area along the periphery of the pier, and the preservation of existing and the construction of new utility services. The pier is to be structurally upgraded to provide additional support for berthing loads and additional capacity to support building loads. The MSP was the focus of associated development proposals that would renovate the facility to house non-maritime commercial activity, such as a new hotel, retail shops, and restaurants. Recent reports indicate that the redevelopment proposals are not proceeding due to the economic climate.

Based on information gathered during the interviews for this study, Gloucester appears to be a preferred landing location for some fishing vessels relative to Portland. Gloucester reportedly has more buyers and fishermen can command better prices. According to informal discussions, Gloucester is competitive as a well established market that is a closer landing port for some vessels than Portland. Another advantage of the Gloucester Fish Auction appears to be that the bidding can be completed online, unlike Portland where bidding must be on-site (Gloucester, Boston and New Bedford have online bidding).

Newport, Rhode Island

State Pier #9 in Newport is the only state owned facility for commercial fishing in Newport Harbor, and provides dockage for approximately 60 full-time fishing vessels. The Pier is operated by The Coastal Resources program of the State of Rhode Island, which is responsible for its development, management and maintenance.

The Pier has been undergoing redevelopment since 2000, when the bulkhead was reconstructed to provide a dedicated facility in Newport to ensure the continued functioning of the state's fishing fleet. More recently, reconstruction of the working pier was undertaken to replace the structural portion that had fallen into disrepair. The working pier is heavily used for loading and unloading by inshore lobster boats and offshore draggers. No other capital improvements for fishing facilities were envisioned at the time of the interviews that were conducted for this study.

Point Judith/Galilee Rhode Island

The Port of Galilee is among the largest fishing ports in New England, serving a varied fleet of 250 commercial fishing vessels, including eighty 80'-100' draggers. The fleet also includes 40' lobster boats, party fishing boats and sport fishing charter boats. The 25-acre port facility is owned by the State of Rhode Island, which leases slips and landside commercial fishing facilities.

In 2002, the Division of Coastal Resources began the implementation of a 5-year plan to improve the infrastructure of the port. The objectives included providing upgraded docking facilities and addressing the shortage of available berthing space for the commercial fishing fleet. This included the construction of new piers and bulkheads, the replacement of old pilings, and the development of improved port facilities. There is demand for additional berthing, particularly among the lobster fleet. To address the shortage of berthing space, new locations for commercial berthing in the Point Judith pond area had to be identified.

Currently, there are no new plans for other capital improvements. The State has established a policy to avoid building expensive capital facilities in view of the changing commercial fishing industry and the high risk associated with creating facilities without established demand. Similarly, the commercial fishing operations have not chosen to create new processing or other substantial shoreside facilities.

8. ALTERNATIVES ANALYSIS

The following recommendations for the Pier are based on the research and discussions undertaken during this study:

Fish Processing Wastewater Pre-treatment Facility

Previous studies and plans have raised the concept that the Jodrey State Pier could serve as the site for a fish processing wastewater pre-treatment facility. This alternative was considered relative to the potential benefits that might be created for the Gloucester fish processors and the municipal system. The review found that there is no current need for such a facility, given the status of the wastewater effluent from the existing processors, the geographic distribution of the processors and the impracticality of creating a central treatment plant, and the lack of any significant identified problems with the wastewater quality being discharged into the Gloucester municipal system today.

A pre-treatment facility can remove harmful contaminants and organisms from the wastewater stream created after fish cleaning and processing, but before the stream is released into the connected sewage system. Untreated wastewater can result in contamination by oils and other pollutants that increase the treatment requirements in the local wastewater treatment system.

The treatment system is typically comprised of a system of pipes and typically two wastewater tanks that remove non-biodegradable debris and provide gross solids retention. One tank is used for standby. As the water travels through the system, pollutants are eliminated or pollutant properties are altered in wastewater prior to or in lieu of discharging the stream into a collection system for a publicly-owned treatment works.

Central systems are in use where there are substantial concentrations of problematic substances. For example, pelagic fish are not generally gutted or cleaned on the fishing vessel. Pelagic fish fillets can contain up to 30% oil, which adds highly soluble substances to effluent streams.

In Gloucester, release of unacceptable concentrations and substances are monitored by the municipal sewer system and its Wastewater Pollution Control Facility (WPCF). Businesses releasing wastewater in violation of standards such as Biological Oxygen Demand (BOD) or Total Suspended Solids (TSS) regulations incur fines.

An extensive study of the circumstances related to wastewater quality and the Gloucester fishing industry was conducted in 1996 (*Water and Wastewater Issues in Developing Gloucester's Fish Processing Industry*. Metcalf & Eddy, Inc. and the Center for Applied Regional Studies, July, 1996.). That study noted:

Despite public misconceptions, Gloucester's water and sewer charges are competitive with those in other regional ports. Fines levied on the fish processing industry have been minor, adding approximately 3% to water and sewer costs.

The fishing and seafood processing industry as a whole is not causing the Gloucester wastewater treatment plant any significant problems (Executive Summary, page iv).

The report did recommend that a surcharge-based pre-treatment process be added to the municipal sewage processing at the existing Gloucester treatment plant, which had the capacity to handle the loads.

Local fish processors are responsibly managing their wastewater. They are responsible for ensuring their waste does not violate regulated discharge limits, and in recent years, fish processors have followed federally-regulated pre-treatment standards through in-house processes and newly adopted methods and technologies. In the course of this study, the recent status of pollutant discharges by the fish processing industry was reviewed. It appears that fines levied on excessive discharges have decreased over time, and are currently negligible. In short, no clear problem has yet to be identified that would require, as a solution, investment in a wastewater pre-treatment facility at the Jodrey State Pier.

Negative Pressure Protein Processing Facility

Protein recovery from the fish processing waste stream is an important component of the fishing industry. In protein recovery, fish parts left over from filleting can be processed and used in food and other products. In fish processing, fish meal is a primary product and fish protein is a valuable by-product. When processed, recovered fish oils can be used in food for human consumption, such as surimi and dietary supplements, flaked fish for aquarium fish food, and many other products.

Past technologies for fish waste processing were associated with powerful unpleasant odors. In Gloucester, a “gurry plant” once occupied a site on Jodrey State Pier and is remembered because of its negative impact down wind.

New technologies have been developed that process fish waste in a negative pressure environment which draws exterior air into the plant and treats it for odors before releasing it back into the local atmosphere. Such plants operate with “negative” pressure to achieve this benefit. It has been suggested that additional capacity for fish gurrying processing could be added at the Jodrey State Pier through investment in such a negative pressure plant.

Based on the reviews conducted in this study, Gloucester’s fish processors appear to be recycling and reprocessing fish waste efficiently. For example, herring and mackerel are currently shipped whole which eliminates the opportunity to recover protein and other by-products. Leftovers from filleted fresh fish cutlets are converted into fertilizer through a hydrolysis process that occurs locally at Neptune’s Harvest. Gorton’s sells fish sawdust to pig farms, and other processors provide excess fat to local restaurants that utilize this by-product. The bait business is an important part of Gloucester’s economy due to the prevalence of pelagic fish. In the summer, herring and mackerel parts are commonly used in lobster traps.

One potential source of a new waste stream could be the processing of pelagic fish in Gloucester. Such processing could imaginably be cost effective if the resource is used for a

high-value end product, such as for human consumption. The market viability of such products and processing being undertaken in Gloucester has yet to be established, however.

Even if additional processing operations occur in the future, it is not clear that additional gurry treatment capacity is required. For example, Neptune's Harvest recently increased capacity by adding four 30,000 gallon processing tanks. The proprietors of Neptune's Harvest have indicated that there is a significant shortage of fish waste supply relative to the market demand for their products.

Until there is a demonstrated demand for protein processing that exceeds the capacity of the existing Gloucester businesses and processes to accommodate it, there is no basis for recommending that investment be pursued for a negative pressure protein processing facility at the Jodrey State Pier.

Truck Parking and Staging

Temporary staging and parking for trucks associated with the Gloucester fishing industry has been a persistent problem in downtown Gloucester and along its Harbor. The problem was recognized in the *Draft Gloucester Harbor Plan and Designated Port Area Master Plan* (2006). The Jodrey State Pier was cited as a possible location to help solve this issue, through the provision of on-site parking.

As part of this study, The Cecil Group reviewed the circumstances associated with this issue. The temporary staging and parking need appears to be caused by trucks that arrive at their destinations early, or find that the truck loading bay is occupied by another vehicle. The drivers of the trucks often need to stay in their vehicle for security reasons associated with the shipping regulations for foodstuffs. The need for temporary parking and staging is effectively a 24-hour/day issue, as truck arrivals are unpredictable. The total demand for such a facility and the pattern of demand (such as peak conditions) does not appear to have been determined.

A facility for truck staging would allow truckers access to food and restroom facilities while their trailer is locked and guarded by a full-time lot attendant. Various locations have been considered by the City to provide relief from this problem, but no clear solution has been identified to date. However, the concept was considered in view of the mission and constraints at the State Pier.

The concept was evaluated using the following criteria:

- Security – A truck staging and parking area would need to be secure from intrusion and interference with the loads and vehicles. The area would need to be separated by fencing from all other Pier access and operations
- Availability – Adequate deck area would need to be available on a 24-hour basis to serve the needs.
- Staffing – The area would need to have constant staffing to provide secure access and egress and monitoring of activities.

- Compatibility – The location would need to be entirely compatible with the needs and operations of the current Pier tenants and users
- Cost Effectiveness – The facility would need to collect fees that would fully cover the capital and operational costs of the facility.
- Competitiveness – The cost and convenience of the facility would need to be competitive with other alternatives that truckers might utilize.

A review of the circumstances at the State Pier relative to these criteria leads to a conclusion that a truck staging and parking facility would not be feasible, for several reasons.

Most prominently, the capital and operational costs associated with such a service would be very high relative to the competitiveness of this location. Capital costs would include building a well-lit, secure area separated by fencing from all other Pier operations and circulation patterns. Additional cost could be associated with providing an enclosed rest area. The facility would require 24-hour staffing. The fees that would need to be charged to cover these costs would be considerably higher than other competitive alternatives, such as the no-cost use of truck stops and highway rest areas prior to scheduled arrival times, or other informal or on-street parking spaces that a trucker may find in or near Gloucester.

The number of trucks that might accumulate is not known, and cannot be readily predicted. As a result, the compatibility with the existing operations at the Pier cannot reasonably be established.

It would seem that truck management or parking area alternatives that would delay or stage vehicles outside of the downtown and Harbor areas would be preferable from a traffic circulation and waterfront use vantage point.

Multi-Use Facility

This study did not establish the basis for demand for a multiple-use tenant facility for the Pier that could occupy the focus site and provide for separate tenancies. Several considerations lead to this conclusion:

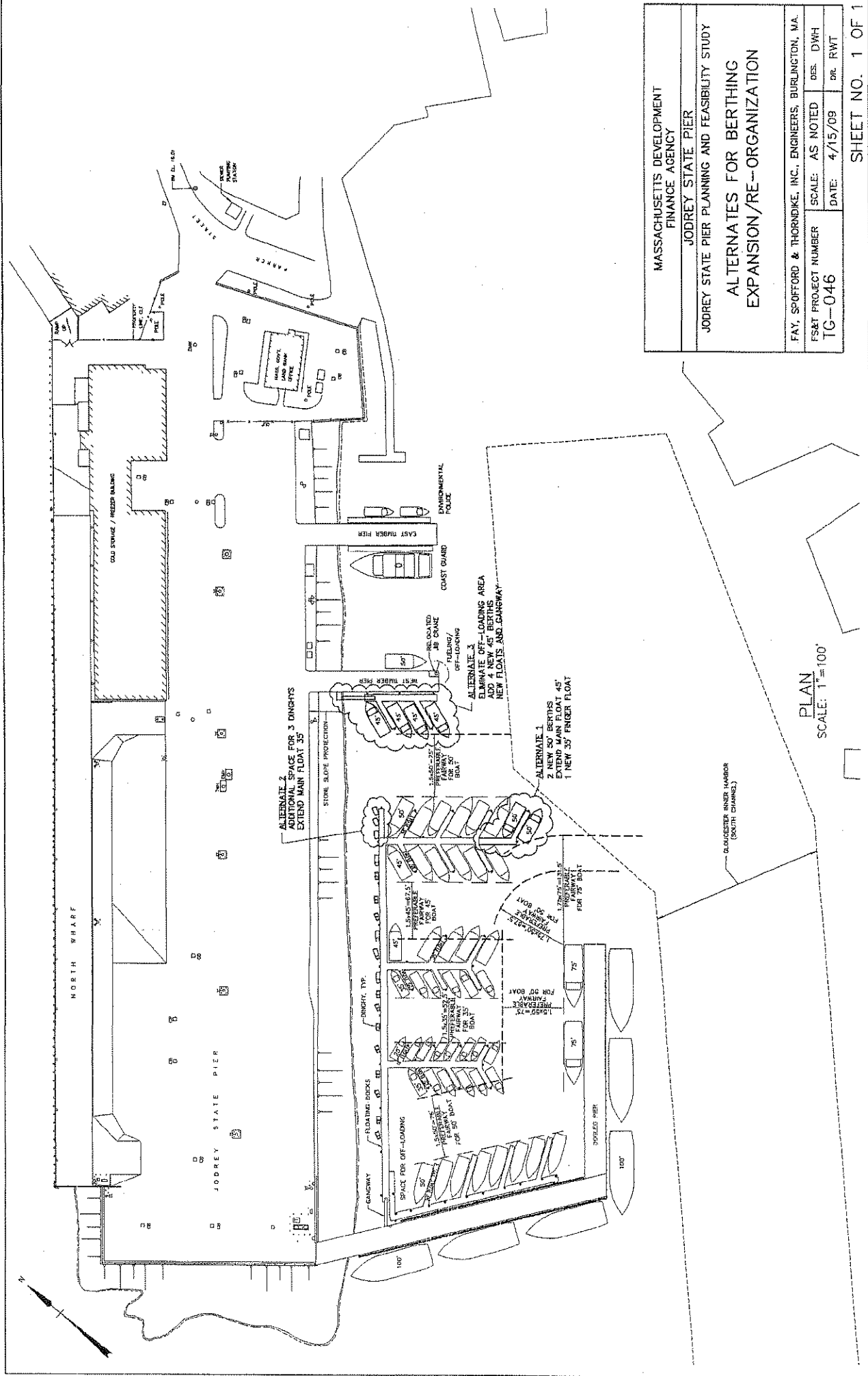
- Low market demand – Due to the condition of the current fishing industry there is no demonstrated need to provide for new facilities at this location.
- Pier location – The available site is not immediately accessible to a bulkhead or wharf or pier which reduces the potential advantages of adjacent docking.
- Competing locations – There are many competing locations, available inland, for fishing-related businesses that do not require direct access to boats, piers or the waterfront.

Expanded Berthing Facilities

A feasibility evaluation was undertaken for expanded fishing vessel berthing facilities. As noted in *Section 4* of this report, there appears to be adequate demand for slips for mid-

length fishing vessels, based on the existing State and City Pier waiting lists (*Appendix C*). Three physical layout options and costs were examined and are documented in *Appendix B*. The results of the analysis are noted below:

- Expansion Alternative No. 1 – The addition of two berths by extending an existing float appears to be operationally and financially feasible. There is adequate depth and maneuvering clearance to accommodate two 50-foot berths in the locations shown. The project cost for this alternative is estimated at \$91,000. Assuming a lease value of \$8,200/year and that 10% of the lease cost would be used to cover increased management and maintenance, the remaining lease income would be adequate to finance the improvements over a 20-year term at a 5% rate of interest. This assumes that there is no increase in lease cost over that term.
- Expansion Alternative No. 2 – The limited expansion of the dinghy float is not considered feasible; there is no reasonable payback period for the \$52,000 expenditure that would produce an incremental income of only \$1,476 per year, even before maintenance and management fees are deducted.
- Expansion Alternative No. 3 – The re-use of a dock that is currently used for fueling/servicing and other activities was examined. The southeast side of the East Timber Pier would be used as the site for this expansion. The project may be considered financially feasible. For example, the project cost for this alternative is estimated at \$189,000. Assuming a lease value of \$14,769/year and that 10% of the lease cost would be used to cover increased management and maintenance, the remaining lease income would be adequate to finance the improvements over a 26-year term at a 5% rate of interest. This assumes that there is no increase in lease cost over that term. However, the re-use of this site is not recommended in view of its importance to the Gloucester fishing fleet for refueling, loading and offloading of equipment, and other similar uses.



MASSACHUSETTS DEVELOPMENT FINANCE AGENCY	
JODREY STATE PIER	
JODREY STATE PIER PLANNING AND FEASIBILITY STUDY	
ALTERNATES FOR BERTHING EXPANSION/RE-ORGANIZATION	
FAY, SPOFFORD & THORNDIKE, INC., ENGINEERS, BURLINGTON, MA.	
FSAT PROJECT NUMBER	SCALE: AS NOTED
TC-046	DES. DWH
DATE: 4/15/09	DR. RWT

9. SUMMARY OF MAINTENANCE AND REPLACEMENT COSTS

As part of this study, the engineering reviews considered the current condition of the pier and docking facilities, taking into account previous analyses and cost estimates prepared separately in 2006. These reviews and associated recommendations are contained in the *Appendix A: Memorandum: Condition Assessment of Jodrey State Pier Marine Facilities*.

The following tables consolidate the cost estimate information regarding the facility maintenance and replacement costs.

Summary of Periodic Maintenance Costs (1)(2)

	Maintenance Period				
	4 Year	8 Year	12 Year	16 Year	20 Year
Short-term Maintenance Needs	\$78,000				
East and West Timber Piers	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Fender System	\$27,563	\$27,563	\$33,075	\$33,075	\$33,075
Concrete	\$27,563		\$55,125		
Electrical System	\$16,538	\$16,538	\$27,563	\$27,563	\$27,563
Pavement and Slope Protection			\$33,075		
Dredging		\$82,688		\$82,688	
Miscellaneous Painting, Ladders, Utilities and Floats	\$16,538	\$16,538	\$27,563	\$27,563	\$33,075
Periodic Costs in Constant 2008 Dollars	\$206,200	\$183,325	\$216,400	\$210,888	\$133,713
Periodic Costs in Escalated Dollars at 5% Annual Rate	\$206,200	\$222,833	\$319,721	\$378,724	\$291,878
Average Annual Costs in Escalated Dollars	\$51,550	\$55,708	\$79,930	\$94,681	\$72,969

Years 1 to 4 5 to 8 9 to 12 13 to 16 17 to 20

Notes:

(1) Assumes maintenance periods are 4 years, and costs are incurred at the beginning of each period

(2) All costs are in 2008 dollars; 2006 estimates have been escalated at 5% per year

Summary of Replacement Costs

	Original Costs	Service Life (years)	Replacement Cost	Notes	Annual Sinking Fund Over Full Service Life		Annual Sinking Fund Over Remaining Service Life		Remaining Service Life (from 2008)
					3%	5%	3%	5%	
<u>North Wharf</u>									
1996 Construction	\$3,814,650	50	\$38,493,000	(1)(2)	\$297,000	\$160,000	\$444,000	\$277,000	38 years
1981 Construction	\$992,250	50	\$4,191,000	(2)(3)	\$37,000	\$20,000	\$115,000	\$88,000	23 years
<u>Fixed Berthing Pier</u>	\$2,240,000	50	\$20,070,000	(1)(4)	\$178,000	\$96,000	\$317,000	\$209,000	34 years
<u>Floating Dock</u>	\$780,000	25	\$2,070,000	(3)(4)(5)	\$57,000	\$43,000	\$162,000	\$146,000	9 years
<u>East and West Timber Piers</u>		25	\$920,000	(6)	\$25,333	\$19,111	\$72,000	\$64,889	9 years
Totals					\$594,333	\$338,111	\$1,110,000	\$784,889	

(1) Assumes replacement in 2046, using escalation factors of 3.24% per year from 1996 to 2006, 5% escalation per year from 2006 to 2046

(2) Costs in 1996 dollars

(3) Assumes replacement in 2031, using escalation factors of 3.24% per year from 1996 to 2006, 5% escalation per year from 2006 to 2047

(4) Costs in 1992 dollars

(5) Includes floats added in 2000, in 1992 dollars

(6) Costs in 2008 dollars

APPENDIX A:

MEMORANDUM: CONDITION ASSESSMENT OF JODREY STATE PIER MARINE FACILITIES

September 12, 2008

MEMORANDUM

**CONDITION ASSESSMENT
OF
JODREY STATE PIER MARINE FACILITIES**

Subject: Jodrey State Pier Planning and Feasibility Study

Fay, Spofford & Thorndike conducted a site investigation at the Jodrey State Pier on July 25, 2008 and July 31, 2008 to assess the condition of the Marine Facilities. The investigation consisted of a low tide inspection on July 25, 2008 from FST's boat, which included the underside of North Wharf, the underside of Finger Pier, and along the sides of the two Timber Finger Piers (there was no access for going under the piers). In addition, soundings were taken at the floating dock area. On July 31, 2008 FST conducted a topside inspection of the North Wharf, Finger Pier, Floating Docks, and Timber Finger Piers, including an inspection of the electrical system while accompanied by Ray Shaw of Mass Development Finance Agency. In general, the marine facilities are in good condition.

The condition of the specific elements of the marine facilities follows:

1. North Wharf

The North Wharf is a 44-foot wide marginal wharf consisting of a reinforced concrete deck supported on steel piles. The westerly 803-feet of the wharf was constructed in 1996 and is supported on steel pipe piles. The easterly 211 feet was constructed in 1981 and repaired in 1996 and is supported on steel H-piles. The wharf is in generally good condition. A description of the major elements follows:

- Piles:

The North Wharf foundation piles installed in 1996 are in good condition. The steel pipe piles are protected by plastic, corrugated jackets, which are in good condition with no significant damage or splits. Some minor damage was observed at a few of the pile jackets where the corrugations had flattened.

Expansion Alternate No. 2

At the east end of the main walkway there is space available to extend the main walkway. This will only provide additional berth space for dinghy's, since there is already a 50 foot berth on the south side of this proposed expansion. A 35 foot long by 6 foot wide float extension will provide space for three additional dinghy's. The estimated cost for this expansion is:

Construction Cost	
Mobilization / Demobilization	= \$ 12,000
Float / Guide Pile Construction: 210 sf x \$105	= \$ <u>22,000</u>
Sub-Total, Construction Cost	= \$ 34,000
Engineering (minimum fee)	= \$ 10,000
Environmental Permitting	= \$ <u>8,000</u>
Total	= \$ 52,000

At the present fee rate, the annual gross revenue for 3 additional dinghy berths is:

$$3 \times \$82 / \text{month} \times 6 \text{ months} = \$1,476 \text{ per year}$$

Expansion Alternate No. 2

East of the floating docks, the fairway width between the floating docks and the west timber pier is wider than necessary. There is enough space available to install additional floats beside the timber pier. This will eliminate the availability of the west face of the timber pier which is presently used for unloading and fueling boats and for transient dockage. If it is determined that there is sufficient space available on the east side of the timber pier for these activities, then floating docks could be added to the west side of the pier to provide space for 4 additional 45 foot berths. This will also require a new gangway to the floats, and the existing jib crane at the southwest corner of the timber pier will have to be relocated to the southeast corner. The estimated cost for this expansion is:

Construction Cost	
Mobilization / Demobilization	= \$ 12,000
Float / Guide Pile Construction: 1140 sf x \$105	= \$ 120,000
New Gangway	= \$ 20,000
Relocate Existing Jib Crane	= \$ <u>5,000</u>
Sub-Total, Construction Cost	= \$ 157,000
Engineering@ 15%	= \$ 24,000
Environmental Permitting	= \$ <u>8,000</u>
Total	= \$ 189,000

At the present fee rate, the annual gross revenue for 4 additional 45 foot berths is:

$$4 \times \$307.69 / \text{month} \times 12 \text{ months} = \$14,769 \text{ per year}$$

Rafting is not a very desirable method of berthing. One boat has to move to let the other one out, and only one boat has direct access to the pier.

The two 75-foot berths are at the inside end of the dogleg pier. Originally there was space for a third 75-foot berth along this face of the fixed pier. When the floating docks were added in 2000 this third berth was eliminated to allow space to access the floating docks. Rafting beside the 75-foot berths is not recommended, not only from the reasons stated above, but also because the fairway between the 75-foot berths and the floating docks would be too narrow.

The floating dock fingers are 6 feet wide and vary in length to accommodate different size boats. Floats are connected by 8-foot wide main walkways. One gangway off the dogleg pier provides access to all the floating docks. The float lengths and corresponding berth lengths are as follows:

<u>Float Length</u>	<u>Berth Length</u>
18 ft	25 ft
25 ft	35 ft
35 ft	45 ft / 50 ft
50 ft	50 ft

Space for dinghy's is also provided along the inside face of the main walkway. Dinghy's tend to use this space primarily in the warmer months.

Other than a few minor possibilities for expansion, the floating dock area is presently laid out and used quite efficiently. The fairway widths between the floating dock piers generally do not provide any excess space for reorganization, as can be seen on the attached sketch. A few minor possibilities for expansion / re-organization are as follows (also see attached sketch):

Expansion Alternate No. 1

At the south end of the easterly floating pier there is a little excess space available. This could accommodate one additional float with a 50 foot long berth on each side of the float. To get to the new float will require extending the main walkway about 45 feet, then adding a 35-foot long float. The estimated cost for this expansion is:

Construction Cost	
Mobilization / Demobilization	= \$ 12,000
Float / Guide Pile Construction: 570 sf x \$105	= <u>\$ 60,000</u>
Sub-Total, Construction Cost	= \$ 72,000
Engineering @ 15%	= \$ 11,000
Environmental Permitting	= <u>\$ 8,000</u>
Total	= \$ 91,000

At the present fee rate, the annual gross revenue for 2 additional 50 foot berths is:

$$2 \times \$341.88 / \text{month} \times 12 \text{ months} = \$8,200 \text{ per year}$$

April 15, 2009

MEMORANDUM

ALTERNATES FOR WATERSIDE EXPANSION / BERTHING REORGANIZATION JODREY STATE PIER

JODREY STATE PIER PLANNING AND FEASIBILITY STUDY

Fay, Spofford & Thorndike evaluated the fixed dogleg pier and floating dock area to determine the feasibility of expansion or reorganization in order to provide additional space for berthing. We reviewed the existing layout plans, berthing assignments and fees obtained from Mass Development Finance Agency, and water depths determined from the soundings taken by Fay, Spofford & Thorndike when the facility was recently inspected. The water depths had not changed significantly since the area was dredged in 1992. It ranged from about 6 feet minimum along the inshore floating dock to around 16 feet near the fixed dogleg pier.

Our evaluation of the layout found that the facility was laid out quite efficiently, without much space available for reorganization or expansion. The floating docks are located inside the dogleg pier, which shelters the floats from wind and waves. The present float arrangement uses most of the available space leaving only minor options for expansion. These options will be presented later in this memorandum. Some consideration was given to expanding the facility to the west of the dogleg pier. That would eliminate some berthing spaces for the 100 foot long draggers and would consist of adding a floating dock system and gangway for smaller boats. However, this is a much more exposed area than the present floating dock area. Not only is it outside the dogleg pier, but it is also beyond the end of the State Pier. We considered this area not well suited for a small boat floating dock system, due to the exposure to wind and waves.

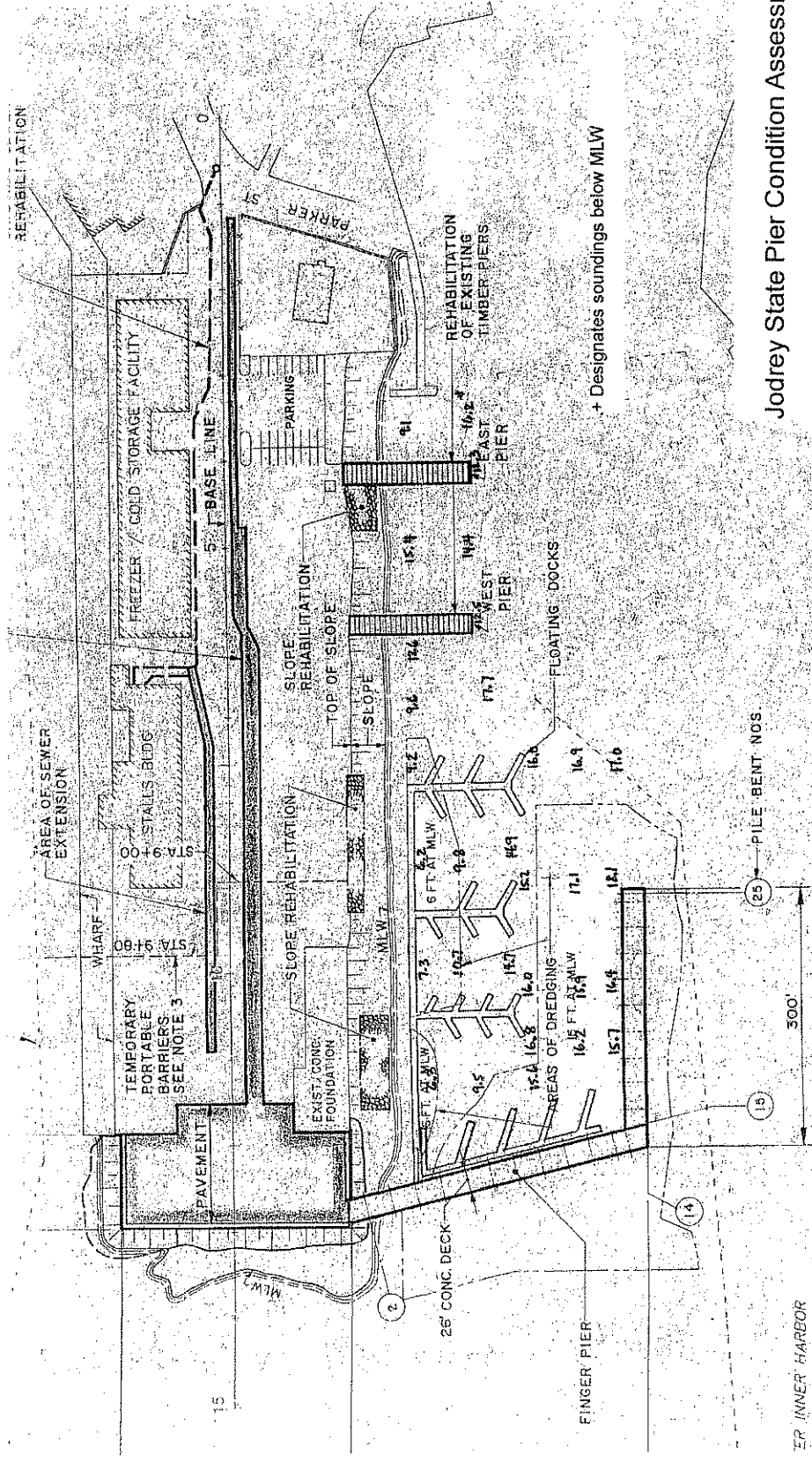
The facility is currently used by a variety of boat sizes ranging in length from 12-foot minimum (dinghy's) to 100-foot maximum (dragger's). We reviewed the list of the present slip assignments which breaks down as follows:

<u>Berth Length</u>	<u>No. of Berths</u>
100 ft	6
75 ft	2
50 ft	14
45 ft	12
35 ft	13
30 ft	8
12 ft	10 +/-

The 100-foot berths are located on the outside face of the fixed dogleg pier (see attached sketch). There is no additional space available without rafting the vessels (2 boats side by side).

APPENDIX B:

MEMORANDUM: ALTERNATIVES FOR WATERSIDE EXPANSION/BERTHING REORGANIZATION JODREY
STATE PIER



Jodrey State Pier Condition Assessment

Soundings

taken July 25, 2008

By: Fay, Spofford & Thorndike

August 9, 2006

GLOUCESTER STATE FISH PIER
BERTHING PIER AND FLOATING DOCKS

FACILITY PLACEMENT COST

	Cost 1992 Dollars	Service Life	Replacement** Cost	Annual Sinking Fund Over Full Service Life 3%	Annual Sinking Fund Over Remaining Service Life 3%	Annual Sinking Fund Over Remaining Service Life 5%	Remaining Service Life	
Fixed Berthing Pier	\$2,240,000	50 yrs.	\$20,070,000 (1)	\$178,000	\$96,000	\$317,000	\$209,000	36 yrs.
Floating Dock	\$780,000*	25 yrs.	\$2,070,000 (2)	\$57,000	\$43,000	\$162,000	\$146,000	11 yrs.
				\$235,000	\$139,000	\$479,000	\$355,000	

* Includes the floats added in 2000, in 1992 dollars.

** Based on 5% Annual Future Cost Escalation and 3.2% per year escalation from 1992 to 2006 based on reviewing Engineering New Record data.

(1) Replacement in 2042

(2) Replacement in 2017

August 9, 2006

GLOUCESTER STATE FISH PIER
BERTHING PIER AND FLOATING DOCKS

MAINTENANCE COST

Assume maintenance done on a four year cycle and consider 20 year maintenance period.

ITEM	AMOUNT PER MAINTENANCE INCREMENT				
	4 YR.	8 YR.	12 YR.	16 YR.	20 YR.
Fender System	\$25,000	\$25,000	\$30,000	\$30,000	\$30,000
Concrete	\$25,000		\$50,000		
Elec. System	\$15,000	\$15,000	\$25,000	\$25,000	\$25,000
Pavement & Slope Prot.			\$30,000		
Dredging		\$75,000		\$75,000	
Misc. Painting, Ladders, Util., Floats	<u>\$15,000</u>	<u>\$15,000</u>	<u>\$25,000</u>	<u>\$25,000</u>	<u>\$30,000</u>
Amount in 2006 Dollars	\$80,000	\$130,000	\$160,000	\$150,000	\$80,000
Amount at 5% Annual Cost Increased	<u>\$98,000</u>	<u>\$192,000</u>	<u>\$287,000</u>	<u>\$328,000</u>	<u>\$212,000</u>
Annual Amount Rounded	\$25,000	\$48,000	\$72,000	\$82,000	\$53,000
Yrs.	1 to 4	5 to 8	9 to 12	13 to 16	17 to 20

Total Amount for Maintenance
Over 20 years – 2006 Dollars = \$600,000

August 9, 2006

GLOUCESTER STATE FISH PIER
NORTH WHARF - INCLUDES 1996 AND 1981 WHARF CONSTRUCTION

FACILITY PLACEMENT COST

North Wharf	Area	Cost 1996 Dollars	Service Life	Replacement Cost	Annual Sinking Fund Over Full Service Life 3%	Annual Sinking Fund Over Remaining Service Life 3%	Annual Sinking Fund Over Remaining Service Life 5%	Remaining Service Life	
1996 Construction	35,300 ft ²	\$3,460,000	50 yrs.	\$38,493,000 (1)	\$297,000	\$160,000	\$444,000	\$277,000	40 yrs.
1981 Construction	9,100 ft ²	\$900,000	50 yrs.	\$4,191,000 (2)	\$37,000	\$20,000	\$115,000	\$88,000	25 yrs.
					\$334,000	\$180,000	\$559,000	\$365,000	

(1) Replacement in 2046. 3.24% escalation per year from 1996 to 2006, 5% escalation per year from 2006 to 2046.

(2) Replacement in 2031. 3.16% escalation per year from 1981 to 2006, 5% escalation per year from 2006 to 2031.

August 9, 2006

GLOUCESTER STATE FISH PIER
NORTH WHARF
WHARF CONSTRUCTION IN 1996 - 803 LF
WHARF CONSTRUCTION IN 1981 - 211 LF

MAINTENANCE COST

Assume maintenance done on a four year cycle and consider 20 year maintenance period.

ITEM	AMOUNT PER MAINTENANCE INCREMENT				
	4 YR.	8 YR.	12 YR.	16 YR.	20 YR.
Fender System					
Piles, Wales, Chocks	\$45,000	\$45,000	\$55,000	\$55,000	\$60,000
Camels	\$30,000	\$30,000	\$55,000	\$55,000	\$55,000
Concrete Repairs	\$25,000		\$50,000		
Electrical	\$10,000	\$15,000	\$15,000	\$20,000	\$20,000
Pile Jacket Repairs	\$30,000	\$35,000			
Misc. Ladders, Painting	_____	\$15,000	_____	_____	_____
Amount in 2006 Dollars	\$140,000	\$140,000	\$175,000	\$130,000	\$135,000
Amount at 5% Annual Cost Increased	<u>\$170,000</u>	<u>\$207,000</u>	<u>\$314,000</u>	<u>\$284,000</u>	<u>\$358,000</u>
Annual Amount Rounded	\$43,000	\$52,000	\$79,000	\$71,000	\$90,000
Yrs.	1 to 4	5 to 8	9 to 12	13 to 16	17 to 20

Total Amount for Maintenance
Over 20 years - 2006 Dollars = \$720,000

Note: North Wharf area = 44,400 FT²
Length of Wharf Constructed in 1996 = 803 ft.
Length of Wharf Constructed in 1981 = 211 ft.
Total 1014 ft.

Cost Estimate for Recommended Repairs

We reviewed the maintenance costs for the North Wharf, Finger Pier and Floating Docks that we prepared in 2006 and consider them to be satisfactory for many of the recommended repairs except as indicated below. A copy of the costs we prepared in 2006 is attached.

Finger Pier:

- Mobilization and De-mobilization:					\$10,000
- Repair 4 Split Jackets:	4	x	\$ 500	=	\$ 2,000
- Clean & Jacket Steel Fender Piles:	14	x	\$1,500	=	<u>\$21,000</u>
					<u>\$33,000</u>

Floating Docks:

- Clean & Re-Coat Steel Guide Piles:	45	x	\$1,000	=	\$45,000
--------------------------------------	----	---	---------	---	----------

The maintenance costs that we prepared in 2006 did not include costs for the East and West Timber Piers. These piers were rehabilitated in 1992. Based on a 25 year useful life replacement would be in 2017. We recommend the following maintenance and replacement costs for these timber piers in 2008 dollars.

East and West Timber Piers:

Maintenance Costs: \$20,000 per pier at 4-year intervals

Replacement Cost: \$460,000 per pier

Recommendations for Repair

In general the marine facilities are in good condition. In addition to general routine maintenance we recommend the following repairs:

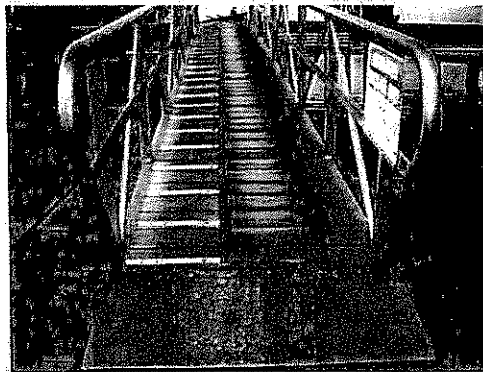
- North Wharf
 - i. Repair the eleven pile jackets that are starting to come apart at the 1981 portion of the wharf. Repairs will consist of grouting and providing stainless steel bands around the jackets.
 - ii. Patch spalled concrete at underside of deck at pipe penetrations and at a few minor locations on top of deck.
 - iii. Replace timber piles and damaged sections of timber curbs as needed.
- Finger Pier
 - i. Repair the four split pile jackets at the foundation piles. Repairs will consist of grouting and providing stainless steel bands around the jackets.
 - ii. Repair the coating in the tidal zone of the 14 steel pipe piles at the fender system. Repairs will consist of cleaning the piles in the tidal zone, wrapping the piles with petrolatum tape, and installing plastic jackets on the piles.
- Timber Piers
 - i. Remove dirt and debris between deck planks and beside curbs.
 - ii. Re-attach spur piles to plumb piles.
- Floating Docks
 - i. Repair coating in tidal zone at the steel guide piles. This will consist of cleaning the piles and recoating.
 - ii. Replace the six missing conical caps on the tops of the piles.
 - iii. Minor repairs to damaged, missing sections of the rubber "D" fenders.



Minor Damage at 'D' Fender

- Gangway

Access to the floating dock system is from a 40-foot long by 4-foot wide aluminum gangway attached to the Finger Pier. The gangway is generally in good condition, except that the top deck surface, which originally was a non-skid surface, has worn smooth. Cleats were added to one side of the gangway to prevent users from slipping. The other side was left smooth so that users can drag their gear up the gangway.



Aluminum Gangway

- Electrical:

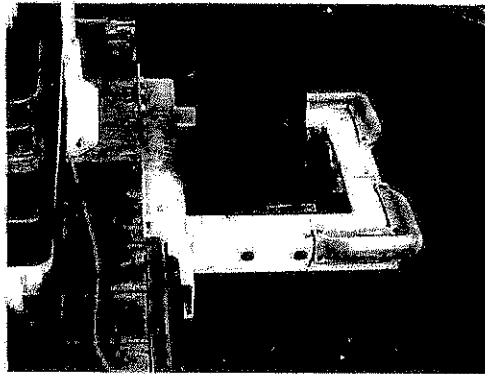
The marina power system cables, pedestal and bollard lights are in good condition. The paint on the pedestals has faded somewhat from the sunlight. Occasionally some of the pedestals have been damaged by rough operations, but they have been repaired.

4. Floating Docks

The floating dock facility is located between the Finger Pier and the West Timber Pier. The majority of the floating dock system was constructed in 1992. An additional section with 5 fifty-foot long fingers was added adjacent to the Finger Pier in 2000. The floating docks consist of aluminum-framed floats with timber plank decking and high density polyethylene foam filled floatation units. The floats are held in place by 10-inch diameter steel pile piles.

- Piles

The piles are in fair condition, but they are heavily rusted in the tidal zone. The conical caps on the tops of the guide piles are missing from 6 of the piles.



Rusted Guide Pile at Floating Dock



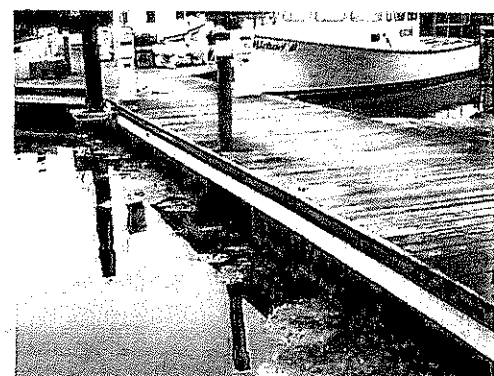
Missing Conical Cap
From Top of Guide Pile

- Floats

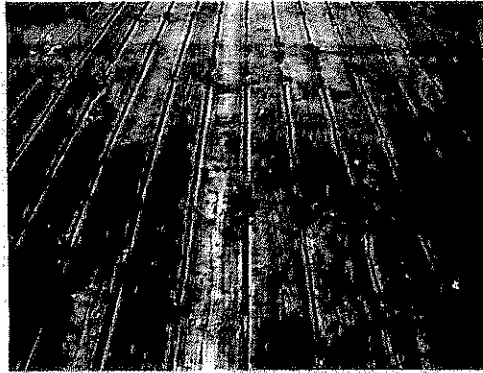
The floats are generally in good condition. The timber deck planks are weathered, but otherwise appear to be in good condition. The rubber 'D' fenders are in good condition except one section, about 6-feet long on the northeast finger is missing, and a few locations have some minor damage. The UHMW Rub Blocks at the pile guides are slightly worn with a rounded shape where the pile hits. There does not appear to be any problems with the floatation units and no listing was observed.



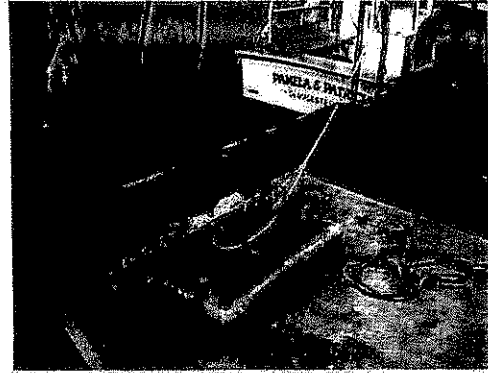
Floating Dock at Main Walkway



Typical Side of Floating Dock



West Finger Pier – Vegetation Between Timber Deck Planks

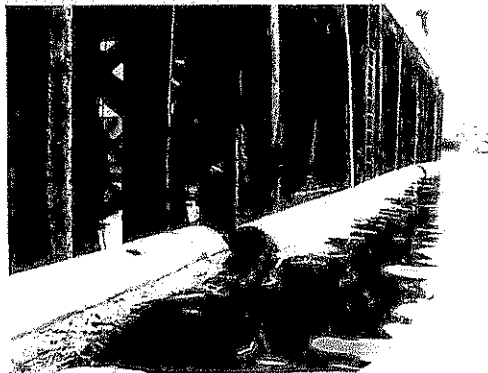


West Finger Pier – Cleat, Note Vegetation Beside timber Curb

- Fender System:

A timber fender system is located around each of the Timber Piers. The fender system consists of timber piles and wales. At the West Timber Pier there are also floating log camels. The timber fender systems and log camels are generally in good condition.

There are no log camels at the East Timber Pier, but there are concrete floating docks on each side of the pier. The floating docks are in good condition. The floating docks at the west side of the pier are held in place by steel pipe guide piles. The piles are painted and there is some paint missing and light to moderate rust in the tidal zone. At the east side the floats are newer and are held in place by galvanized steel pipe sections and brackets which are in very good condition. With the floating docks located in front of the timber fender system, the timber fender system at the East Timber Pier is redundant.



Timber Fender System And Log Camels At West Timber Pier



Concrete Floating Docks At East Timber Pier

- Electrical:

The electrical service / power outlets are in good condition.

3. Timber Piers

There are two timber piers to the east of the finger pier called the East and West Timber Piers. The West Pier is used for fueling boats. The Coast Guard and the Environmental Police use the East Pier. The piers consist of timber piles supporting a timber deck system. The piers are generally in fair to good condition.

- Piles

The visible portions of the piles (above the low water level) are in good condition. The bracing is intact. Spur piles typically tie into the exterior vertical foundation piles. Many of these spur piles are not connected to the vertical piles.



West Finger Pier – Foundation Piles And Bracing. Note that spur pile at far side is not connected to vertical pile



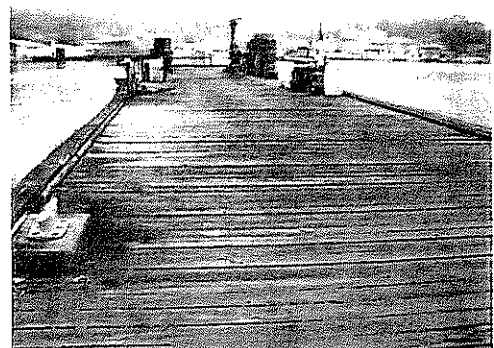
East Finger Pier Foundation Piles and Bracing

- Timber Deck:

The timber deck system consists of 4" x 8" timber deck planks supported on 6" x 12" timber stringers. The stringers looked to be in good condition. The timber deck planks are weathered and are in fair condition. Some dirt has accumulated between the deck planks on top of the stringers and vegetation is growing. The dirt and vegetation will retain moisture, which will accelerate possible rot or decay to the timber were it is in contact.



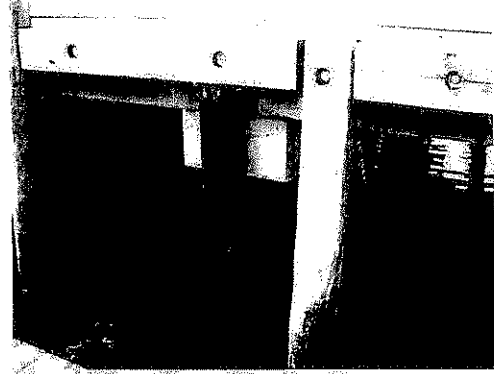
West Finger Pier – Underside Deck



West Finger Pier – Top of Deck



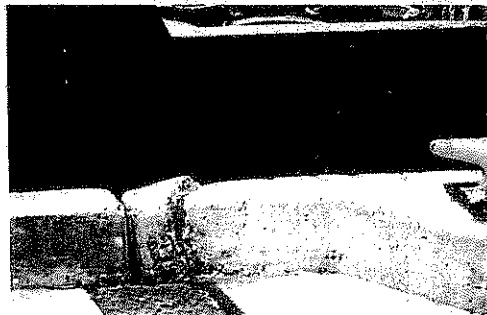
Finger Pier – Selected Timber Fender
Pile Replacement Work in Progress



Steel Pipe Pile at Fender System
Heavily Rusted in Tidal Zone

- Curbs and Ladders:

The curbs and ladders are in generally good condition. At one location, the end of the curb was broken off and distorted. This is adjacent to the expansion joint at the spot where the pier changes direction.



Finger Pier –Broken / Distorted
Section Of Curb at Expansion Joint

- Electrical:

The electrical system is in very good condition. The astronomic clock that controlled the lights was removed from the control cabinet and now the lights are controlled by photoelectric from dusk to dawn. Two light poles were removed because the out rigging on the larger ships hit them at low tide. Occasionally some of the power pedestals have been hit by vehicles or deck operations and have been repaired. Ray Shaw of Mass Development Finance Agency indicated that the larger fishing boats can now utilize three phase power but the pier is only equipped with single-phase power. The power could be changed to three phase by adding another wire and changing the pedestal breakers and receptacles where three phase is required.



Finger Pier Foundation Piles



Finger Pier – Split at Jacket
Exposing the Foundation Pile

- Concrete Deck:

The concrete deck system consists of prestressed concrete deck planks composite with a cast-in-place concrete topping. The top surface is generally in good condition with some light cracks. The underside of the prestressed concrete planks is in good condition.



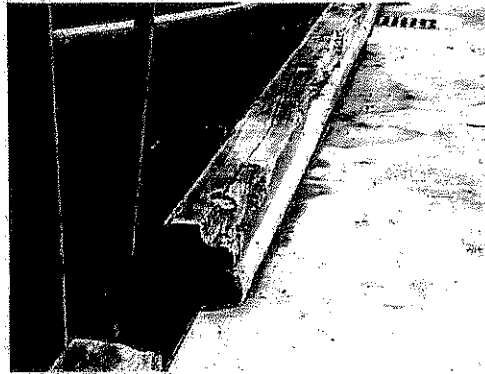
Finger Pier – Top of Concrete Deck



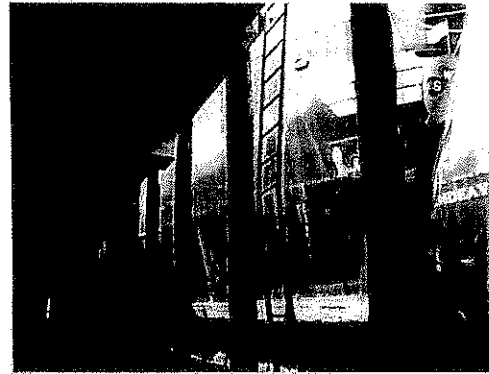
Finger Pier – Underside of Prestressed
Concrete Deck Planks

- Fender System:

The fender system consists of peeled oak piles and timber wales. The fender system is generally in fair to good condition. A few selected piles were being replaced at the time of our inspection. The tops of the piles are generally in good condition, but we could see deterioration to the submerged part of the piles that had been pulled for replacement. The replacement piles are greenheart. Some 10-inch diameter steel pipe piles are located behind the fender piles at the inshore 175 feet of the pier. These piles are at an area where the timber fender piles could not be driven very deep into the ground due to high bedrock. The steel pipe piles were installed in rock sockets and provide lateral support to the timber fender system. These steel pipe piles are rusted in the tidal zone.



North Wharf - Damaged Timber Wear Strip and Bent Ladder



North Wharf - Bent Ladder

- Electrical:

There are no electrical power outlets at the north wharf, but there are conduits installed in the deck out to the face of the north wharf if power is needed in the future. There is lighting at the north wharf, which is in good condition. An additional cold storage building was installed after the North Wharf was constructed in 1996. Lighting is attached to the north wall of the building consisting of pack Moldcast Paracyl fixtures similar to the wall-packs used at the existing cold storage building.

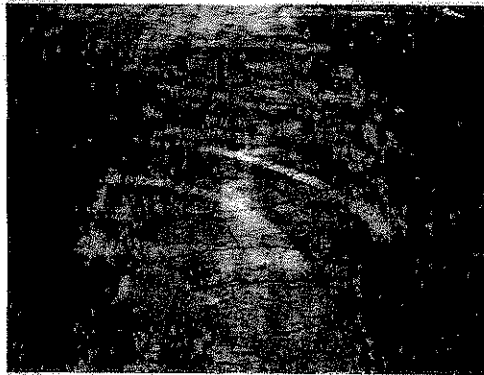
2. Finger Pier

The Finger Pier is 26-feet wide by about 653 feet long, consisting of a reinforced concrete deck supported on steel pipe piles. The pier was constructed in 1992. The pier runs about 363 feet to the southeast, and then turns 76.5 degrees and runs another 300 feet to the northeast resulting in a dogleg. The pier is in generally good condition. A description of the major elements follows:

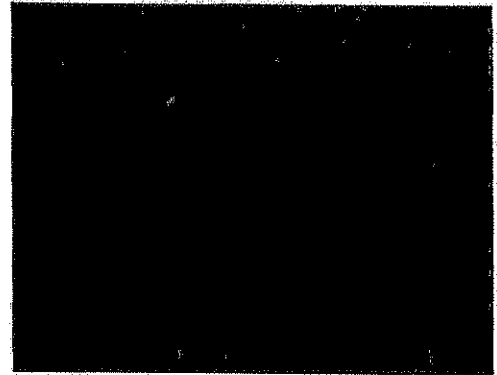
- Piles:

The foundation piles are in good condition. The piles are protected by plastic, corrugated jackets which are filled with about 2-inches of concrete between the jackets and the piles. The jackets are generally in good condition with no significant damage or splits, except that 4 of the jackets have vertical splits ranging in length from about 2 to 8 feet. At two of these splits some of the concrete fill is missing and portions of the steel pipe piles are exposed.

approximately 420 feet from the west end of the wharf. The concrete has spalled around the penetrations.



North Wharf – Map Cracks at Top of Deck



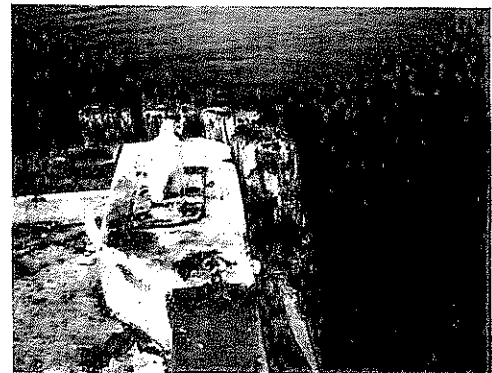
North Wharf – Spalled Concrete at Pipe Penetrations Through Pre-Stressed Concrete Deck Planks

- Fender System:

The fender system consists of peeled oak fender piles with timber wales, and floating log camels. The fender system is generally in good condition. However, there is some rot and damage to the tops of about 25% of the piles, which typically occurs at the upper 2 or 3 feet of the piles.



North Wharf - Timber Fender System
And Log Camels



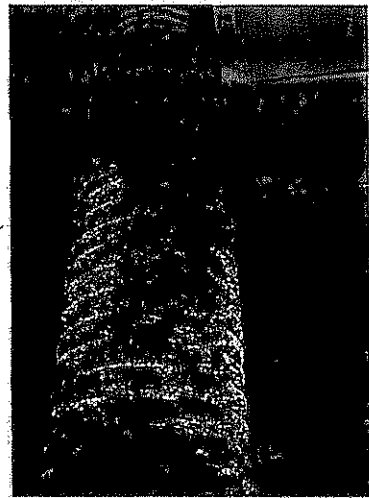
North Wharf – Rotten / Damaged
Tops Of Timber Fender Piles

- Curbs and Ladders:

The concrete curbs with timber wear strips are in fair to good condition. Approximately 10% of the timber wear strips have been damaged. Four of the 14 ladders were bent.

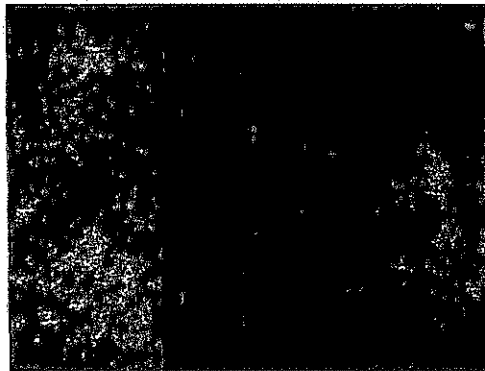


North Wharf Foundation Piles



North Wharf – Minor Damage
To Foundation Pile Jacket

At the easterly 211 feet of the North Wharf, the piles are steel H-piles that were originally encased in concrete when they were installed in 1981. In 1996 fiberglass jackets were added because the concrete encasement was deteriorated and spalled, exposing portions of the steel H-Piles. The jackets were filled with concrete between the original concrete encasement and the jacket. The jackets are generally in good condition except that we observed about 11 of the 227 pile jackets were starting to come apart and unravel.



North Wharf – Pile Jacket on Piles at East
End Starting to Come Apart & Unravel

Concrete Deck:

The concrete deck consists of prestressed concrete deck planks composite with a cast-in-place concrete topping. The top surface of the concrete deck is in fair condition. There is map cracking on the top surface, but very little spalling or deterioration. The map cracking occurred at the time the deck was constructed in 1996. The top surface was damp at the time of our inspection, due to rain the night before. This accentuated the map-cracks. The underside of the concrete deck is generally in good condition. However, there are several pipe penetrations

Summary of Alternates for Expansion

<u>Alternate</u>	<u>Description</u>	<u>Cost</u>	<u>Annual Gross Revenue</u>
1	Two 50-ft Berths	\$ 91,000	\$ 8,200
2	Three Dinghy Berths	\$ 52,000	\$ 1,476
3	Four 45-ft Berths	<u>\$ 189,000</u>	<u>\$ 14,769</u>
Total		\$ 332,000 *	\$ 24,445

- * Costs are based on assumption that only one alternate is constructed at a time. If all three alternates are constructed together, there will be some cost savings due to only one Mobilization / Demobilization Cost and only one Environment Permit Cost.
Cost if all Alternates are Constructed Together = \$292,000

Environmental Permitting

The alternates for expansion will require environment permits. The time required to obtain the environment permits typically takes from 6 to 9 months.

Based upon the alternates for expansion of the floating dock system, held by piles, it is our opinion that the following environmental permits filings will be required:

- **Massachusetts Environmental Policy Act Office**
Notice of Project Change under EOEA No. 5781
- **Massachusetts Department of Environmental Protection (MassDEP)**
Wetlands Protection Act and the
City of Gloucester Wetlands Ordinance Section 12
Notice of Intent filing
- **Massachusetts Department of Environmental Protection (MassDEP)**
Waterways Regulation Program
Chapter 91 license filing
- **Gloucester Municipal Harbor Plan**
Review through the MassDEP Chapter 91 and CZM Federal Consistency Review
- **Designated Port Area**
Review through the MassDEP Chapter 91 and CZM Federal Consistency Review
- **U.S. Army Corps of Engineers**
Programmatic General Permit filing
- **Federal Coastal Zone Management Consistency Review**
Federal consistency is presumed because the work falls below the threshold for formal review.

APPENDIX C:

WAITING LISTS: JODREY STATE PIER AND GLOUCESTER CITY PIER BERTHING

Jodrey State Pier Dockage Wait List

Berth Size Dinghy

Position On List	Application Date	Owner Name	Address	Phone Number	Boat Name	Length	Beam	Draft
1		Doug Mac Auther				20ft		
2		Matt Cooney	113 Mt. Pleasant Ave Glou.	978-479-4250		19ft	5ft	8in
3		Chris Duffey	3 Branch Ln Beverly MA	978-737-8006		16ft	4ft	
4		Horst Tretter	45 Decater St.	978-883-7458				

Berth Size 30 ft

Position On List	Application Date	Owner Name	Address	Phone Number	Boat Name	Length	Beam	Draft
1	4/27/2007	Giuseppe Brancalone	8 Fleet Woods Dr. Glou. MA	508-284-6351	Divine	29ft	10ft	3ft
2	3/28/2008	Robin Hubbard	5 Roberts Ct. Glou. MA	978-283-5266	Robin Jean	30ft	7ft-8in	1ft

Jodrey State Pier Dockage Wait List

Berth Size 35 ft

Position On List	Application Date	Owner Name	Address	Phone Number	Boat Name	Length	Beam	Draft
1	6/1/2004	Fred Marshall	615 Western Ave. Magnolia	978-525-3927	Tragabigzanda	31ft	11ft	4ft-6in
2	8/2/2004	Joseph Mondello	13 Taylor St. Glou. MA	978-281-6469	Tully IV	33ft	3ft	1ft
3	3/21/2005	William Brown	30 Pigeon Lane Glou. MA	978-282-4663	Kathryn Leigh	31ft	6ft	11in
4	8/15/2007	Kevin Twombly	25 Grove St. Chelmsford MA	508-577-0541	Kayman Too	35ft	3ft	12ft-6in

Jodrey State Pier Dockage Wait List

Berth Size 45 ft								
Position On List	Application Date	Owner Name	Address	Phone Number	Boat Name	Length	Beam	Draft
1	4/3/2003	Wallace Gray	P.O. Box 178 Stonington ME	978-239-8497	Foxy Lady II	45ft	6ft	15in
2	8/22/2003	Philip Powell	65 Carson Terr Swampscott	781-581-2821	Fox Lady	42ft	16ft-8in	5ft-6in
3	11/13/2003	Bruce Bornstein	7 Fieldbrook Rd. Marblehead	978-744-6600	Sara Jake	37ft	14ft	3ft-6in
4	2/25/2004	Joseph Edelstein	21 Flayan St. Peabody MA	978-815-7902	Amy Elizabeth	42ft	18ft-2in	4ft-4in
5	3/22/2004	Hilary Dombrowski	24 Gee Ave. Glouc. MA	978-281-1497	Destiny	36ft	12ft-5in	4ft
6	8/5/2004	Dean Mould	102 Magnolia Ave Glouc.	978-525-3726	Dominatrix	39ft	14ft-2in	5ft
7	4/5/2005	Joseph Jurek	172 High St. Andover, MA	978-407-3652	Mystique Lady	42ft-	16ft-2in	6ft-5in
8	10/30/2006	Daniel Murphy	12 Mansfield St. Glou. MA	978-397-1772	Bantry Bay	36ft	13ft	3ft
9	1/7/2007	Andrew Bartlet	3 Fair St. Gloucester, MA	978-852-3460	Jeanne	42ft	15ft	6ft
10	8/15/2007	Kevin Twombly	25 Grove St. Chelmsford MA	888-752-9626	Lisa Jake	40ft	14ft	6ft
11	9/27/2007	Bill Muniz	8 Link Rd Gloucester, MA		Never Satisfied			

Jodrey State Pier Dockage Wait List

Berth Size 50 ft

Position On List	Application Date	Owner Name	Address	Phone Number	Boat Name	Length	Beam	Draft
1	3/31/2005	Mike Dearborn	10 Oliver St. salem, MA	978-744-5725	Miss Courtney	44ft		
2	8/2/2005	Mike Leary	3 Orchard Dr Hampton Falls	603-234-3399	Pamet	48ft-	18ft	6ft
3	1/7/2007	Andrew Bartlet	3 Fair St. Gloucester, MA	978-852-3460	Jeanne	42ft	15ft	6ft

Berth Size 75 ft

Berth Size 100 ft

ST. PETER'S SO. MARINA

WAIT LIST

As of May 18, 2007

1. Scott M. Horne 150 Magnolia Ave Gloucester tel: (978) 525-3284
23 ft 8' beam "Touch of Gray" MS 5018 SL wk: (978) 282-9486
2. Patrick Santos 35 Derby St Gloucester 12/28/01 tel: (978) 281-3853
42 ft 16' beam "Rizla II" MS 9406 AJ cell: (978) 852-3339
3. Douglas Germain 14 Lyndale Ave Gloucester 1/9/02
42 ft 12'6" beam "Labor In Vain" tel: (978) 283-3408
4. George Cabral 17 Winthrop Ave Gloucester tel: (978) 283-8916
30 ft 13' beam "Little Star" MS 30 CG
5. Charlie Scola 29 Bond St., Gloucester 7/28/03 tel: (978) 590-8120
40 ft 12 1/2' beam "Linda Gale" MS 9936 AU wk: (978) 281-9760
6. Joseph DeSalvo 35 Shore Rd., Gloucester 5/17/04 - *by phone*
25 ft "Katherine N Too" tel: (978) 525-2063 cell: (617) 828-0631
7. Joseph Sanfilippo 1 Thornhill Way Gloucester 10/12/04
22 ft (no name) tel: (978) 884-3625
8. Horace Kendall 3 Howard Rd Gloucester 11/23/04 tel: (978) 282-4944
24 ft 10' beam "Savannah Drew" MS 5614 AC
9. Thomas E. Hale 11 Hampden St Gloucester 8/8/05 (978) 283-4533
16 ft 6' beam (no name) MS 6404 KL wk: (978) 282-2000
10. John Herrick, Jr. 11 Whittemore St Gloucester 10/25/05 (978) 283-1592
35 ft 13.5' beam "Dog & I" MS 9900 A cell: (978) 239-7101
11. Matthew Lawton 24 Friend St Unit 1 Gloucester 3/21/06 (978) 283 4641
40 ft 10' beam "Linda Gale" MS 5536 AU cell: (978) 290-2637
12. Joe Edelstein 21 Fay Ave Peabody MA 01960 5/2/06 (978) 532-5943
43 ft 17.6' beam (978) 580 0815
13. Aaron Tuffley 3 Avon Ct. Gloucester 2/26/07 (978) 3878 7600
29 ft 10.5 beam "Lady Margaret" 583035

APPENDIX D: INFORMATION SOURCES

Assessment of 19 Northeast Groundfish Stocks through 2007: Report of the 3rd Groundfish Assessment Review Meeting (GARMIII). Northeast Fisheries Science Center, August, 2008.

City of Gloucester Harbor Plan and Designated Port Area Master Plan. Gloucester Harbor Implementation Committee, July 2006.

Gloucester Seafood Industry Directory, 2008.

Gloucester State Fish Pier Redevelopment Project. A.T. Kearney, January 1994.

Gloucester Waterfront Study: Land Use and Economics (Draft). David G. Terkla Ph.D. and Jack Wiggan, Urban Harbors Institute, University of Massachusetts Boston, August, 1994.

State Fish Pier Revised Redevelopment Plan, July 1, 1994.

State Fish Pier Site Development Plan. Goody, Clancy and Associates. November 1994.

A Study of Gloucester's Commercial Fishing Infrastructure: Interim Report. Gloucester Community Panel, October 15, 2003.

Water and Wastewater Issues in Developing Gloucester's Fish Processing Industry. Metcalf & Eddy, Inc. and the Center for Applied Regional Studies, July, 1996.

Note:

Statistical data gathered from the National Marine Fisheries Service includes: Commercial Fishery landings by millions of pound and by millions of dollars from 1981 to 2007 for New England ports; list of American ports ranked according to the dollar value of their landings from 1982 to 2007; list of American ports ranked according to the weight of their landings by millions of pounds from 1982 to 2007.

